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A Carved Ivory Fragment of the Twelfth Century Discovered at St. Albans

By H. H. KING, B.A. and O. M. DALTON, M.A., F.S.A.

[Read 12th May 1921]

THE conditions under which the beautiful carved ivory fragment illustrated on pl. I, fig. 1, was discovered may be given in the words of Mr. H. H. King, through whose friendly intervention it has been added to the collections in the British Museum. The discovery was made in 1920 on Mr. King's land by his gardener,¹ in the spring following the filling in of the trenches which he describes, while fragments of tile and stone were being collected from the surface of the replaced soil to fill in a hollow place in a garden path.

During the summer of 1920 the St. Albans and Hertfordshire Architectural and Archaeological Society conducted some excavations on what was believed to be the site of the infirmary of the Abbey of St. Albans. The Society's Records included a plan made by Rev. H. Fowler in March 1875, which showed certain of the walls of the infirmary as having been actually exposed by him. The ground was opened in several places, but the results were not as satisfactory as had been expected. A great deal was found, in the way of walls and foundations, but all were at a considerable depth, and none could be made to fit in with the plan of 1875. Accordingly the Society decided that the continuance of these excavations was proving more costly than the results were likely to justify; but before the

¹ The credit for the discovery is shared by Mrs. King, who recognized the importance of the find as soon as the gardener handed it over to her.

trenches were filled in, a scale drawing was made by Sir Edgar Wigram, A.R.I.B.A., of the actual remains exposed.

In one place there was found buried a mass of worked clunch stones, some of a considerable size, of varying periods, loosely placed together, the whole forming a compact mass about 8 ft. by 5 ft. by 5 ft. deep. Throughout the trenches, at all levels, there were found quantities of broken pottery, tiles, and stained glass, together with Roman and other bricks, three pieces of carved Purbeck marble, bones of many kinds, and a few metal articles. A careful examination of the sides of the trenches seemed to show beyond question that the whole area had been used as a dump for rubbish from the monastery during a long period, and that comparatively recently the various heaps of rubbish had been roughly levelled. This is proved by the fact that nothing was found except in a badly broken condition, and that in some cases the more ancient fragments lay above those of more recent date, while the strata of disintegrated clunch sloped in all directions. Mr. G. E. Bullen, F.R.Hist.S., the Director of the Herts. County Museum, has very kindly assisted me in the following description of the more interesting articles found :

Among the metal objects, the most important is a fragment of a dagger, believed to be a 'dague à rouelles', with the lower grip ring still *in situ*, a type constantly represented in illuminated manuscripts of the early fifteenth century, which there is reason to believe remained as the 'knightly misericord', as late as the second battle of St. Albans in 1461. An arrow head of iron, fairly perfect, measuring probably $1\frac{1}{2}$ in. between the extremities of the barbs, and now $2\frac{3}{4}$ in. in length, is also attributed to the fifteenth century.

Among objects of other materials were : a fragment of a clay tobacco pipe with very small bowl and flattened heel, probably of the period of Elizabeth to James I ; fragments of table knives of the seventeenth century, a snaffle probably of the eighteenth, two brass horse ornaments, and the pan of a moneyer's balance, together with the tusk of a boar.

The pottery comprised a large number of fragments of tiles, large pitchers, drinking vessels, and a fragment of a shallow bowl. These include : a number of fragments of what appear to be completely unglazed work in pitchers of fairly large size, chiefly in light buff and grey earthenware ; fragments of pitchers in a fine red earthenware, exceptionally well potted, with the fronts lead glazed, showing the characteristic green specks of the fourteenth and fifteenth centuries, the handles in

certain instances decorated with small depressions such as would be made with the point of a knife; a few fragments of early green glazed ware in which the oxide of copper has more perfectly fused with the galena; four fragments (none showing evidence of glazing) of a pitcher with a very dark grey body, slightly decorated with yellowish slip; a few fragments of sixteenth century Siegburg ware, small drinking pitchers of the common form; one fragment of a Bellarmine, and a triangular fragment, lead glazed, showing two perforations not at right angles with the run of the wheel, the nature of which has not been determined.

Among the tiles is one $1\frac{3}{8}$ in. thick with a red body and imperfectly glazed surface, exhibiting characteristics similar to Cistercian ware. This is interesting in view of the fact that two drinking vessels of similar character, now in the Herts. County Museum, were discovered in St. Albans and Kensworth, as distinguished from fragments of the manganese dioxide ware which is of common occurrence. There are also a fragment of a plain green glazed tile; two very poor examples of encaustic tiles of a pattern similar to those in the abbey; and fragments of plain yellow glazed tiles $1\frac{3}{8}$ in. in thickness.

After the above miscellaneous objects had been collected, the trenches were filled in and the site roughly levelled.

H. H. K.

The ivory is carved in a favourite medieval design in which men, animals, and monsters are involved in symmetrical foliate scrolls. In the twelfth century, towards the middle of which the carving was probably made, this motive is seen in its full development, and appears to have been equally popular in various countries. It finds expression in all materials, occurring in stone sculpture, in the ornamentation of ivory and bronze objects, in manuscript illumination, and in greater painting. This wide distribution in an age when decorative design was cosmopolitan often renders it difficult to say where any portable example was actually made.

Discovered as it was on the site of the great Abbey of St. Albans, itself a centre of artistic activity, this work may possibly have been produced in the abbey itself. In support of this contention we might point to illuminated initials in a St. Albans manuscript of Josephus in the British Museum.¹ But the

¹ 13. D. vi. In support of an English, as opposed to a continental origin, we may cite two Canterbury MSS. in the British Museum with initials of this type: Claudius E. v, especially f. 4 b., and Harley 624, f. 103 b. A Rochester MS. of

argument from illuminations cannot be pressed too far, since resemblances equally close could probably be found in continental books.¹ The same disturbing similarities are apparent when we seek parallels in the field of sculpture. The analogy between our carving and the tau-cross in the Victoria and Albert Museum² (pl. I, fig. 2) could hardly be closer than it is; though the work of the tau-head is not pierced, yet the whole is deeply undercut, and the design stands out clearly against deep shadow, producing a somewhat similar effect. The cross has been described as north European; and there seems no reason why we should claim it as English. Not so close, but still nearly related, is a relief in the Musée des Augustins, Toulouse, once in the Prieuré de la Daurade or in the church of S. Sernin in that city;³ in this work, ascribed to the second half of the twelfth century, we see two convolutions of similar foliage, in one of which is a Pan or satyr, in the other a man strangling a monster. These two instances are alone enough to arouse a feeling of uncertainty as to the source of any given work introducing this widely distributed motive; and doubt as to an English origin in the present case is somewhat increased by the narrow border, resembling a classical egg-and-tongue moulding, on the lower edge. The presence of such a feature rather suggests the influence of southern France, where classical reminiscences are more frequent than in other parts of western Europe. As a claimant to the authorship of this charming fragment, our country has certainly competitors, and to decide definitely in our own favour we should perhaps have to give more weight to the fact of discovery on English soil than the migratory fortunes of medieval ivories can fairly allow. But an origin in England, and even in St. Albans, is possible, though it might be hard to prove.

We have noted above that the ivory is a fragment, but it is not easy to say what appearance it presented when perfect or what kind of object it enriched. There was probably a second

St. Augustine on the Psalms (5 D. III, f. 1) affords another example, and it would be easy to extend the list.

¹ Of the type of the Louvain bible of A.D. 1148, in the Museum (*Add.* 14, 788).

² No. 372. 71. Victoria and Albert Museum, W. Maskell, *A description of the Ivories, &c.*, p. 135, *Portfolio of Ivories*, pl. xiii; *Archæologia*, lvij, p. 408, fig. 1.

³ Vitry and Brière, *Documents de sculpture française*, plate vii, no. 1. H. Rachou, *Cat. des coll. de sculpture et d'épigraphie du Musée de Toulouse*, p. 189, no. 453, ascribes the relief, not to S. Sernin (as Vitry), but to the Prieuré de la Daurade. We may also notice plate xxxix, no. 2, a capital from the triforium of the choir in the cathedral at Laon dating in like manner from the latter part of the twelfth century.



FIG. 1. Twelfth-century carved ivory fragment from St. Albans ($\frac{1}{1}$)

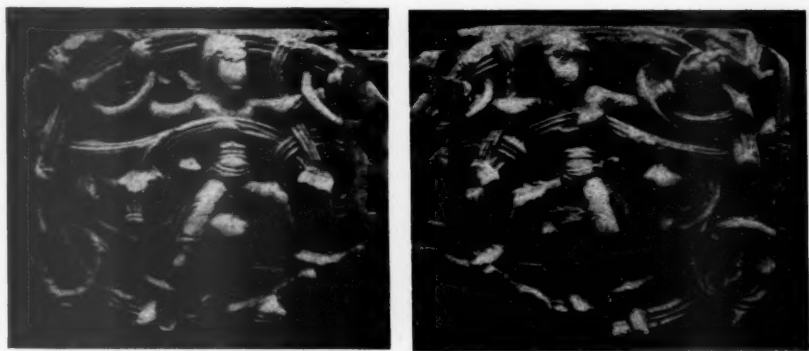


FIG. 2. Arms of ivory tau in the Victoria and Albert Museum ($\frac{1}{1}$)

(Reproduced by permission of the Victoria and Albert Museum)

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concentric scroll of foliage containing a figure to balance that which we possess, and the work was evidently fixed to a flat surface, perhaps a book-cover, perhaps some object of ecclesiastical use; it has four small holes for pins or rivets. The portion of the ivory which shows most wear is the face of the human figure, though this is actually less salient than the knee. It is most likely that in its normal condition the work was coloured and gilded, though in that state it would appeal less to our modern taste than it does in its present unadorned condition in which the charming tone of the ivory produces its full effect.

C. M. D.

DISCUSSION

Mr. MACLAGAN had studied the parallel at Toulouse, and thought that the tau-cross was closer than the French sculpture to the St. Albans ivory. The Toulouse work was more classical and he was struck with the many analogies there to English work of the same period. In the middle of the twelfth century there must have been a steady stream of emigration from the south of France, and it was extraordinarily difficult to refer work of that period to its place of origin.

Mr. PAGE recalled the existence of a school of art at St. Albans which attracted artists from all parts of Europe. The ivory was possibly carved there by some immigrant Frenchman or Norman, as suggested by the recorded names of strangers arriving at St. Albans.

The PRESIDENT said the carving was an exceptional work of art of a kind seldom exhibited to the Society. With all his experience Mr. Dalton had been puzzled to decide its origin, and Mr. Page's suggestion was an interesting one. In medieval times communication with the Continent was as easy, in proportion to other conditions of life, as at present, and craftsmen were apt to wander about and leave specimens of their art for one purpose or another at their various halting-places. There must have been considerable traffic from Bordeaux, and it was quite possible that a casket to which the ivory belonged was brought from that port to St. Albans. The Society was grateful to Mr. King for showing a precious example of medieval ornamentation, and would be gratified to hear that it was to pass into the national collection. Thanks were also due to Mr. Dalton for his illuminating comments on the exhibit.

Some Irish Antiquities of Unknown Use

By E. C. R. ARMSTRONG, F.S.A.

IN Sir William Wilde's *Catalogue of Bronze Antiquities*¹ is described and illustrated under the heading of chariot furniture an iron-backed bronze disc, $3\frac{3}{4}$ in. in diameter, coated with white metal, projecting from which is a bronze stud in the form of a dog's head, $1\frac{1}{2}$ in. long, with a human head engraved on its muzzle. The stud is threaded by a bronze chain made up of two rings and double loops (fig. 1, 1). Wilde considered this object was intended for the attachment of a trace. It was found when making a railway cutting near Navan Station adjoining the River Boyne in July 1848, associated with a quantity of human remains; the skull of a horse; a number of antiquities including a bronze bridle-bit, and harness-plate; iron rings plated with bronze; some small bronze buttons; and seven ornamented gilt-bronze plaques.

Wilde stated that the human bodies did not appear to have been placed in any order; in the surrounding earth was found a great quantity of charcoal extending from 2 ft. to 10 ft. below the surface. 'A small portion only of the grave, or battle-pit (if such it were), was traversed by the railway cutting, so that much of the ground of this very remarkable interment remains as yet unexplored'.

The animal-headed boss, to which Wilde's figure does scant justice, remained an isolated specimen in the collection for some seventy years until at the sale in 1920 of the antiquities preserved at Killua Castle an object of the same character was obtained; details as to its discovery being unfortunately not recorded.

In its present state the Killua specimen consists of a bronze disc coated with white metal, to the sides of which were apparently attached ornaments of cut-out interlaced work of gilt-bronze; of these one portion only remains. To this disc was fitted a movable bronze projection in the form of a horse's head; apparently this was also coated with white metal. The upper portion of the animal's face and its open mouth are gilt; the nostrils are marked by spirals; the eyes were filled with settings of blue

¹ 1861, p. 611.

² *Op. cit.*, pp. 573, 574.

enamel. The pierced horse's head is threaded by a stout ring of bronze, which threads in turn a ring fixed to a plaque of bronze coated with white metal, engraved with lines and circles, and

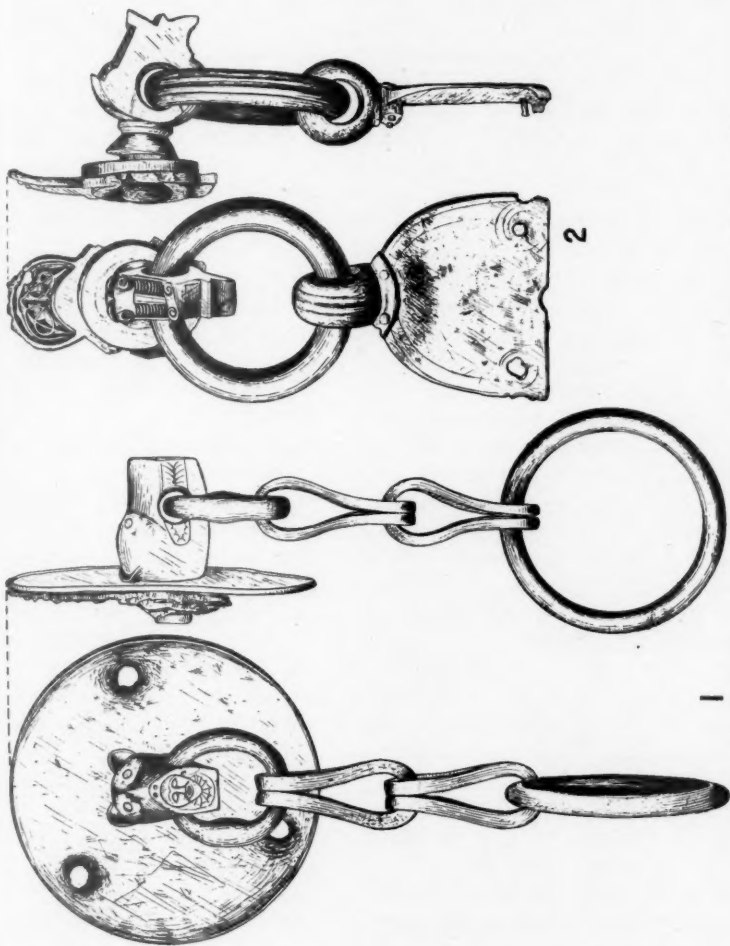


FIG. 1. Bosses, 1 found at Navan, co. Meath; 2 from Killua, co. Westmeath ($\frac{1}{2}$).

having rounded shoulders: this plaque had attachments for fastening it to some material (fig. 1, 2).

The Navan boss has already been described in general terms; the illustration (fig. 1, 1) makes further details unnecessary.

Attention may, however, be directed to a few points. The eyes of the animal are formed of red enamel ; its teeth are indicated by lines ; while the two nostrils placed close together make it apparent that the artist intended the head for that of a dog. The most curious feature is the human face engraved on the animal's muzzle. This is represented wearing a flounced collar, giving the face an appearance not unlike that of a ' pierrot '.

It is to be noted that whereas nothing is known to have been found with the Killua boss, its one remaining ornament of cut-out gilt interlaced-work is of the same character as that on two of the seven gilt-bronze mountings found with the Navan boss. This furnishes an indication that the two objects are contemporary. What the original purpose of either may have been is not easy to determine.

The Navan find, fourteen objects belonging to which are preserved in the Royal Irish Academy's collection, has not been adequately published, for, as above stated, Wilde's figure of the boss is unsatisfactory. He illustrated three only of the seven gilt-bronze ornaments, the details of these not being in all respects correctly represented.¹

Next to the boss the most interesting objects in the find are the seven gilt-bronze ornaments (pl. II) ; these were furnished at the back with eyes for attachment. One, according to Wilde, was cleaned by a jeweller : this both from its appearance, and by testing with a touchstone, is clearly copper rather than bronze.

As will be seen by the illustrations (pl. II), which are all made to the same scale (slightly below natural size, no. 1 measuring exactly 1.9 in. across at the arms), two of these plaques are almost duplicates ; these two with another (no. 4) show only interlaced decoration. Two are ornamented with spirals, as well as with zoomorphic ornament and interlaced work. The remaining two are decorated with zoomorphic and interlaced patterns. The workmanship of all is admirable.

A detailed description of each plaque is rendered unnecessary by the illustrations, but the zoomorphic ornament on nos. 1, 3, and 5 may be remarked. On no. 1 it consists in the upper expanded limb of interlaced birds' necks, a design not unlike that to be seen on the silver brooch of Viking date found at Virginia, co. Cavan.²

The animals crouching with reversed head on the arms of no. 5 are similar ; the junction of their limbs is marked by spirals and in

¹ Three of Wilde's illustrations were refigured with a drawing of the horse's bit in the *Royal Irish Academy Celtic Christian Guide*, 1910.

² Coffey, *Royal Irish Academy Celtic Christian Guide*, pl. iv, 1.

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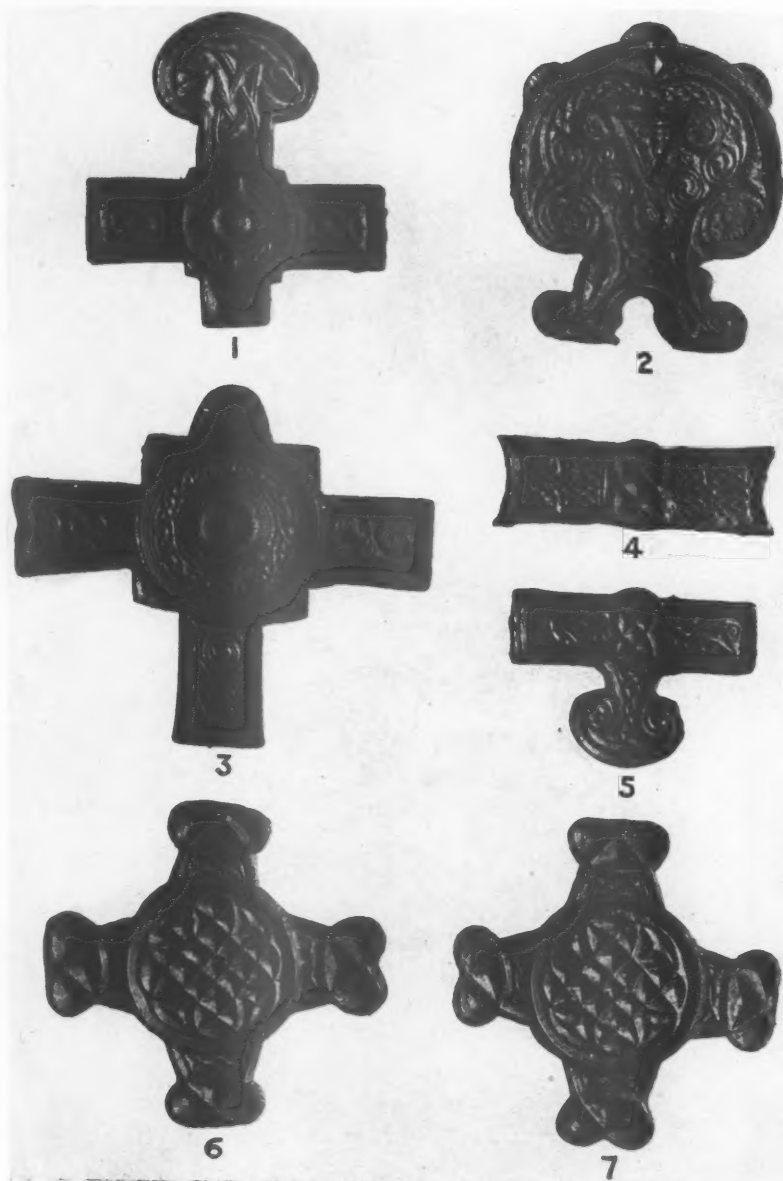
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PLAQUES OF COPPER OR BRONZE, GILT, FOUND AT NAVAN, CO. MEATH
 (slightly below natural size)

general outline they resemble that on the dexter arm of no. 3 (shown reversed on the plate). The bird-necked zoomorph in the centre of plaque no. 2 bears a resemblance to that on the pin-head of one of the Ardagh brooches.¹

A crouching animal looking backwards, a useful design for filling a rectangular space, is not infrequently found on Irish metal work; it may be observed upon the back of the Killua Shrine.² It may be noted that Salin, who considers two of the chief styles of Irish ornament as adapted from the German, i.e. the geometrical and the zoomorphic, considers the crouching animal with turned head when found in Irish ornamentation to be indicative of German influence.³ The relationship between Irish and Germanic zoomorphic ornament being of a complicated character, it would appear safer to regard both as derived from the same source, rather than to consider the Irish as adapted from the latter. In this connexion Mr. O. M. Dalton's *Byzantine Art and Archaeology* may be profitably studied (pp. 25-27).

The finding of the objects at Navan associated with the skull of a horse, a horse's bit, and the boss, caused Wilde to consider that a chariot had formed part of the interment. But no remains of this appear to have been found.

It is, however, to be noted that Rygh⁴ has figured a number of gilt-bronze plaques found in Norway which closely resemble those found at Navan. Rygh describes these as being of Irish style, worked either in Ireland or in Scotland,⁵ or England, after the penetration of the Irish style to those localities. Ten such plaques were found at Some, Høiland, Stavanger, with a horse's bit of iron, an oval bronze brooch, some rings, etc. Another was found with a piece of a sword, or of a lance-head, and an iron ring possibly from a horse's bit. Therefore, it seems there is some reason for considering that such ornamental plaques as those found at Navan were used for the decoration of horse furniture.

The large boss present in the Navan find, considered by Wilde as the attachment of a trace, may well have been attached to a vehicle of some kind, for it is difficult to imagine to what portion of the actual harness of a horse it could have belonged.

The term chariot used by Wilde calls to mind the classical type with small wheels and a body close on the ground, drawn by

¹ Smith, *Archæologia*, lxx, p. 243.

² *Antiquaries Journal*, I, pl. v.

³ *Altgermanische Tierornamentik*, pp. 342, 343.

⁴ *Norske Oldsager*, figs. 618-27, see also pp. 32 and 76.

⁵ Two bronze-gilt mountings of this type found in Perthshire are illustrated in the *Catalogue of the National Museum of Antiquities of Scotland*, 1892, p. 201.

a pair of horses. That chariots presumably of this type were in use in Ireland in the La Tène period seems clear from the descriptions in the *Táin Bó Chálnge*.¹ For the vehicles in use in the early Christian period we have little evidence. What is available is to be found carved on the base of the High Cross of Muiredach, at Monasterboice, co. Louth; on the base of the east face of the cross of King Flann at Clonmacnois, King's County; the South Cross, Kells, co. Meath; the North Cross at Ahenny, co. Tipperary; and the right arm of the west face of the Cross at Killamery, co. Kilkenny.

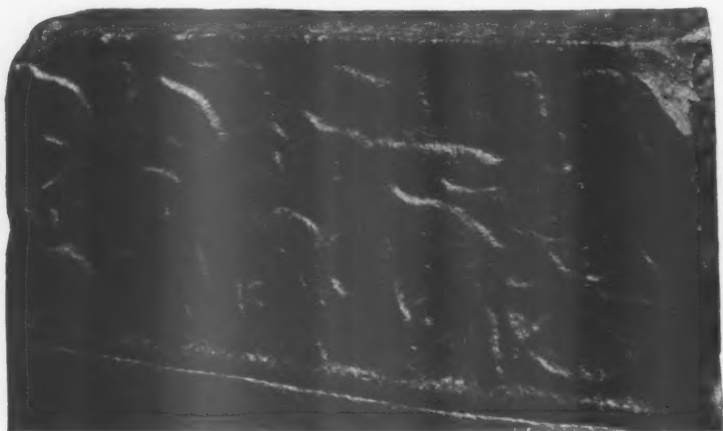


FIG. 2. Panel from North Cross at Ahenny, co. Tipperary.

The bases of Muiredach's cross, of King Flann's cross, and of the Kells Cross, are much worn: it is difficult to make out the details of the vehicles represented; but they differ from the classical examples in having wheels of a larger diameter. Professor R. A. S. Macalister's drawing of the first,² and Mr. T. J. Westropp's of the second,³ may be examined. Mr. Westropp, who remarks that the carvings on the Clonmacnois cross are weathered, and that Petrie's view of the cross seems to be idealized, adds that the north chariot has a boat-shaped back and a nine-spoked wheel. Better preserved is the base of the Ahenny cross; as can be seen from the illustration (fig. 2) two horses are shown,

¹ See Windisch, *Táin Bó Chálnge*, 1905, introduction, pp. xii-xv.

² *Muiredach*, p. 69.

³ *Journal Royal Society of Antiquaries of Ireland*, xxxvii, fig. on p. 294, description on p. 292. See also Petrie, *Christian Inscriptions*, i, pl. xxxiii.

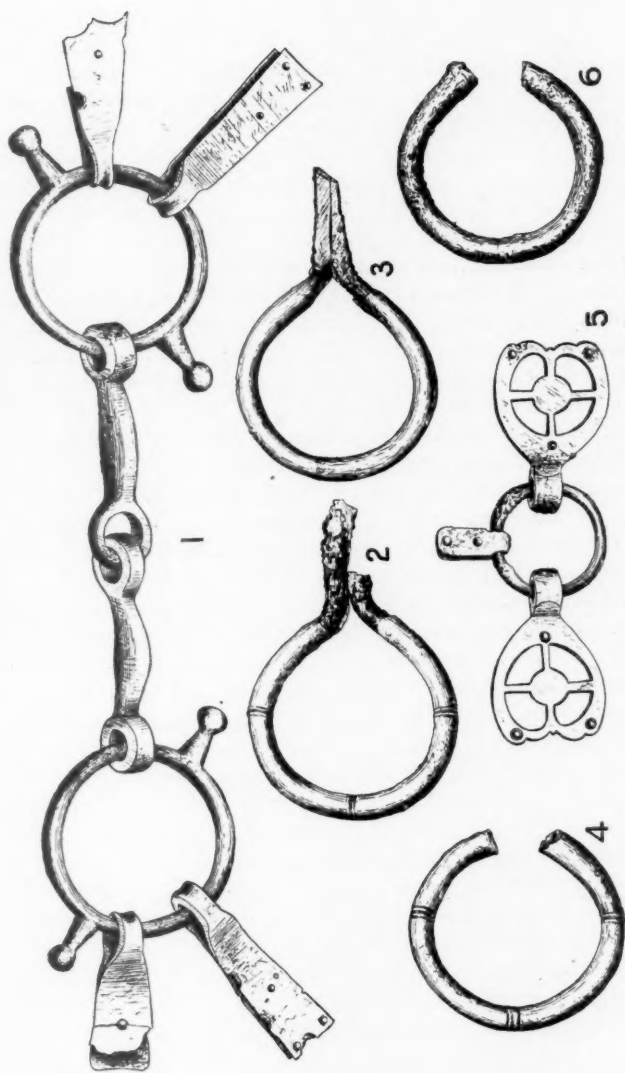


FIG. 3. Bronze horse-bit, etc., found at Navan, co. Meath (1).

while the body of the car appears to be flat, the occupants having their legs stretched out over the horses' backs.

The remaining objects (fig. 3) of the find include the horse's bit which is made of bronze : it is an ordinary snaffle with stops on the rings, to each of which are attached rein-tangs : another bronze object consists of a ring which threads two similar open-work plates and a small tang ; the two open-work plates have attachments at the back for fastening them on to some material, probably a strap of leather. The four rings are made of a core of iron coated with bronze ; two of them have staples by which they could have been driven into a wooden bar. Possibly they were used for the attachment of traces. One is slightly ornamented. The other two rings, one of which is ornamented, are penannular.

On the whole it seems probable that the Navan boss and rings were attached to a vehicle, while the specimen from Killua also may have been similarly attached. It is, however, not so easy to form an idea of its use, for unlike the Navan boss with its ring, which could be conveniently used, the Killua boss has an attached plate ; this may, however, have been fastened to a leather strap.

To date the Killua boss and the various objects belonging to the Navan find is a matter of some difficulty. Coffey,¹ who devoted a few lines to the find, wrote 'the trumpet pattern on some of them places the objects probably before the tenth century'.

The similarity of the zoomorph on one plaque (pl. II, no. 2) to those on the pin head of one of the Ardagh brooches and of the interlaced birds' necks on another (pl. II, no. 1) with those on the Virginia brooch has been mentioned. A suggested date for the first brooch is the middle of the ninth century, for the second the middle of the tenth.² At this period the influence of the Vikings had begun to make itself felt in Ireland, in which connexion it is perhaps worth while remarking that the horse's head on the Killua boss shows a resemblance to the animal-headed weight found in the Norse cemetery at Island-Bridge,³ in both cases the nose being ridged and the nostrils decorated with spirals.

The spiral attachments of the limbs of the animals on two of the plaques (pl. II, nos. 3 and 5) show that in any case these objects are not earlier than the eighth century A.D.⁴ But the excellence of their workmanship gives little indication of the period of decay. Therefore, the late ninth or early tenth century may be suggested as a probable date for both the Killua boss and the Navan find.

¹ *Royal Irish Academy Celtic Christian Guide*, 1910, p. 71.

² Smith, *Archæologia*, lxxv, pp. 249, 250.

³ *Proc. Royal Irish Academy*, Coffey and Armstrong, xxviii, sec. C, p. 119.

⁴ See *Altgermanische Tierornamentik*, pp. 343, 344, and 357.

A Village Site of the Hallstatt Period in Wiltshire

By MRS. M. E. CUNNINGTON

THE site of an Early Iron Age village on All Cannings Cross Farm, about six miles east of Devizes, was discovered quite by chance. In this corn-growing country great open ploughed fields fringe the lower slopes of the high chalk downs. At All Cannings Cross the ploughed land stretches to the foot of Tan Hill and Clifford's Hill, on the Marlborough Downs, overlooking the vale of Pewsey. The site of the settlement has been under plough for many years, perhaps for centuries, so that any surface indications there may once have been, have long since disappeared.

Our attention was first drawn to the spot by the unusual number of the rough implements known as 'hammerstones' that were strewn over the ploughed surface. It looked as if some special local industry in which these stones were used had been carried on there, and in 1911 we cut a few trenches to test the site. We found a considerable quantity of pottery, bones, etc., and a few fragments of bronze and iron. A short account of this was published in the *Wiltshire Archaeological Magazine*, vol. xxxvii, p. 526. The site was not touched again until the autumn of 1920, when a small area was examined. The extent of the settlement is not known, but to judge from the distribution of the hammerstones over the surface it probably covers several acres. From first to last no evidence has been found to show what the hammerstones of flint and sarsen were used for; it seems that they must have been used in dressing stone for some purpose, perhaps in making querns and mealing stones out of the sarsen boulders that occur naturally on these Downs.

It is perhaps worth mentioning that before we dug we never found more than two or three small worn sherds of pottery, nothing to suggest the wealth of pottery that lay beneath, just too deep to be touched by the plough. The site has yielded a great quantity of pottery; fragments representing not far short of a thousand pots have been found; a good many bone implements such as pins, needles, combs, scoops, etc.; spindle-whorls, loom-weights, bronze and iron slag, fragments of crucibles, and a large number of bones of animals that had been used for food.

The chief interest and importance of the site lies in the fact that the pottery as a whole seems to belong to the Hallstatt period, and to be throughout of Hallstatt type.

It has been possible to restore from fragments twenty-nine complete vessels. By the help of these the forms of the vessels to which most of the rim pieces and larger fragments belonged can be recognized. In this way a fairly comprehensive idea of the whole group of pottery in use on the site can be made; at least that part of it that has so far been examined.

The commonest type, the pot that seems to have been in everyday domestic use, is not unlike some of the cinerary urns from barrows believed to be of the late Bronze Age. Most of these are provided with a row of 'finger-tip' impressions round the shoulder and immediately below the rim. Pots of this urn-like type vary in size from 3 inches in height up to 16 inches and upwards (see fig. 4). Similar fragments from chance finds on other sites have no doubt been assigned to the Bronze Age, but as a general rule the ware is better baked and consequently harder than that of most cinerary urns from barrows.

A number of pieces of the better wares are ornamented, and have highly polished surfaces, some black, some brown and 'leathery', others red in colour. The ornament consists almost entirely of chevrons, and of small circles, stamped or impressed. The chevrons are often formed by bands of circular or triangular punch marks, enclosed within deeply incised lines. The lines and punch marks are, more often than not, intentionally filled in with a white chalky substance to emphasize the pattern against the black, red, or brown background of the pottery.

Some of the vessels had two or three rows of elaborate chevron pattern arranged one above the other from neck to base, with a row round the neck like a Vandyke collar (see fig. 5). Perhaps the most distinctive type is that of a carinated bowl (see fig. 2) with incised lines, or impressed furrows, between rim and shoulder, and with a slightly indented or 'omphaloid' base. These are of grey ware, usually coated with a bright red pigment, others have a burnished black or brown surface.

Mr. Thomas May, to whom fragments of the red-coated bowls were sent, compared the process of colouring to that employed in the early Egyptian 'black-topped' ware. Mr. May describes the process thus:—'The natural body clay is first coated with a well-washed pasty slip, and after drying coated with haematite (in the form of rouge or ordinary red ruddle) by dipping in a watery solution, or rubbing. It is then polished with a smooth stone and burnt in an open fire.'



FIG. 1

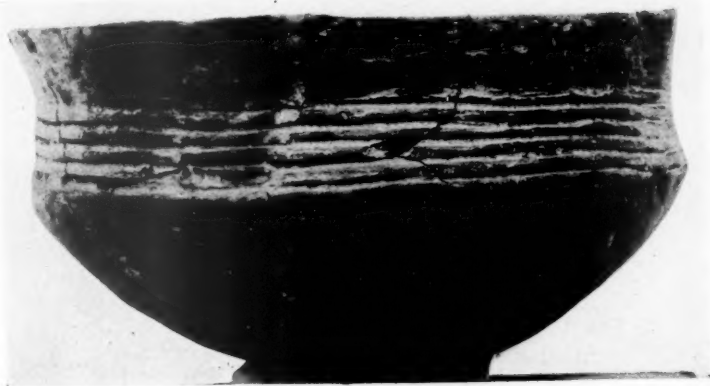


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FIG. 3



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SITE OF HALLSTATT PERIOD IN WILTS 15

The only two brooches as yet found on the site are both of the type known as La Tène I. This does not, however, detract from the value of the evidence afforded by the pottery as a whole that the settlement began earlier. The occurrence of early La Tène brooches in association with Hallstatt types of pottery merely shows

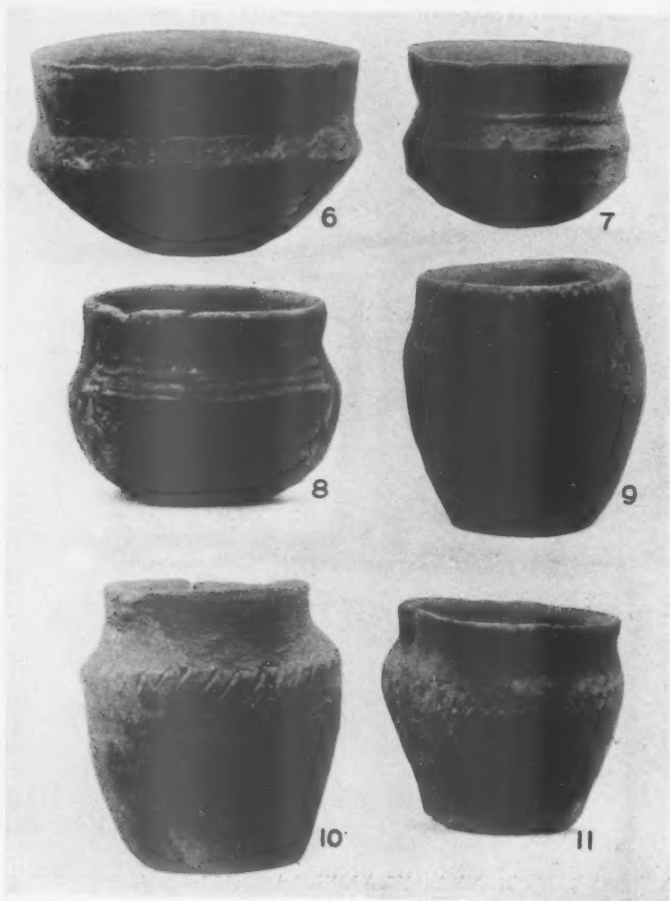


FIG. 5.

that the site continued to be occupied to be occupied at least as late as the time when these brooches came into fashion.

There is no hard and fast line between the Hallstatt and La Tène periods, only a gradual evolution and change of types. One would expect to find a fashion in small portable objects such as brooches to change and spread more rapidly than that of pottery, which, from its bulky and fragile nature would be difficult to move about. According to Déchelette this type of brooch dates in France from about 400 to 250 B. C., so that it may have appeared

in Britain soon after 400 B. C. There is good reason to believe that the site was not occupied before the beginning of the Iron Age. The haematite-coated bowls with the omphaloid base, which



FIGS. 6-11.

may be regarded as the most characteristic and distinctive type on the site, occur, where there is any depth of deposit, equally from top to bottom.

The fact that the occupation of the site seems to have lasted for a comparatively short and definite period, perhaps some three

centuries more or less, renders it all the more interesting and instructive from an archaeological point of view. Not a single fragment of anything Roman has been found, so that the occupation seems to have ended well before the Roman conquest, perhaps even some centuries earlier.

The graceful curved lines and flamboyant scrolls characteristic of the La Tène or British 'Late Celtic' culture, such as are found at Hunsbury, Glastonbury, and elsewhere, are conspicuous by their absence; and if this style of ornament ever prevailed in Wiltshire it had not been evolved before the village at All Cannings Cross was abandoned. It is true that with the exception of brooches very few objects characteristic of 'Late Celtic' art have been found in Wiltshire, but if it is entirely wanting that is in itself a very remarkable and unaccountable state of affairs.

It is, at least, unlikely that the geometric and less evolved style as represented at All Cannings Cross continued there unchanged down to the time of the Roman conquest, while to the west in Somerset, and to the east and north in Oxfordshire and Northants, the style was so far in advance, as shown by such sites as Glastonbury, Hunsbury, and numerous chance finds.

All Cannings Cross seems to be the only site so far known where this type of pottery has been found unmixed with other wares. But there is no doubt that such pottery will be, and, indeed, has already been found on quite a number of sites in Wiltshire and elsewhere. These chance finds, however, have been fragmentary and mixed with later, and perhaps also with earlier wares, and they have rarely been recognized. It is, indeed, difficult, if not impossible, to reconstruct new or unfamiliar types of vessels from mere fragments.

The best known site on which similar pottery has been found is Hengistbury Head in Hants. It is the 'Class A' pottery described in the Report by Mr. Bushe-Fox and Mr. Thomas May (*Excavations at Hengistbury Head*, Report of the Research Committee of the Society of Antiquaries).

Fragments described in the Report under Classes E and F also have analogies at All Cannings Cross.

Class A pottery at Hengistbury was believed to be the earliest on the site, and by a process of elimination it was assigned to the Hallstatt period. The finds at Hengistbury were fragmentary and mixed, and their situation on the coast opposite the continent with so much of admittedly foreign origin, although highly suggestive, was not in itself sufficient evidence of a native Hallstatt culture. But the occurrence of a site so far inland as All Cannings Cross, with a whole group of pottery exclusively of these types, is

practically conclusive. And when, in addition to this, fragments from quite a number of other sites can now be identified as belonging to the same types, the conclusion is irresistible that this particular group of pottery represents a definite phase in the Early Iron Age culture of Britain.

The evidence from Hengistbury also goes to prove that the culture represented at All Cannings Cross is an early and distinct phase, and not a backward contemporary of Glastonbury and Hunsbury; for there a sequence was discernible from the All Cannings Cross group (Class A) to that of Glastonbury and other later pottery. Doubtless excavation on other living-sites will amplify the evidence, and make clear much that is now problematical.

Until quite recent years nearly all archaeological energy has been expended on burial-places; and of the comparatively few living-sites examined nearly all have been Roman, or Romanized. It almost seems as if we had learnt all there is to learn at present from barrows and burials, but some of the problems connected with them may yet be cleared up by the help of knowledge gained from living-sites. It is at least a possibility that some of our so-called late Bronze Age barrows that contain only cinerary urns, and those of a type practically identical with the commonest form of domestic vessel in use at All Cannings Cross, are really the burial places of some of these Early Iron Age people. It has been remarked by one who professed no knowledge of archaeology that nearly all the burial sites had been attributed to the Bronze Age, and nearly all the living sites to the Iron Age.

No burials have been as yet found at All Cannings Cross, and with the exception of a few fragments of skulls, no human remains to help in determining the racial affinities of its inhabitants. But it seems probable that the settlement was that of a new people, i. e. people who had not been here in the Bronze Age, but who came over early in the Iron Age as one of the many waves of immigration from the continent, bringing in their own fashions with them.

The reason for this surmise is that the group of pottery taken as a whole is so unlike anything known to have been in use in Britain during the Bronze Age.

Had new methods and fashions merely straggled in by a process of peaceful penetration, one would not expect to find a whole group of pottery differing so much from that long established in the same region. One would expect rather to find single examples of the new mingled with the older types, and only gradually supplanting them.

In this connexion it is interesting to remember that the probable

date of the settlement, the fifth or sixth century B.C., coincides with that of the migratory period of the historical Celts; and it is suggested that the settlement at All Cannings Cross was a direct outcome of the movements of these people.

Only a small part of the settlement has as yet been touched; it is hoped to go on with some further excavation, and eventually to publish a fully illustrated account of the discoveries.

DESCRIPTION OF ILLUSTRATIONS

FIG. 1. Height 11, rim diam. $8\frac{1}{2}$, base $5\frac{1}{2}$, greatest diam. at shoulder 14, depth from rim to shoulder $4\frac{1}{2}$ inches. Light brown ware, outer surface polished, with four rows of circular impressions, three above and one below shoulder.

FIG. 2. Height $4\frac{1}{2}$, rim diam. $8\frac{1}{2}$, base 3 inches. Carinated bowl of grey ware, red coated, with omphaloid base; sharply incised horizontal lines between rim and shoulder.

FIG. 3. Height 13, rim diam. $16\frac{1}{2}$, base $7\frac{1}{2}$ inches. Ware fine and thin; surface polished, red to brown and black; ornamented with series of three impressed parallel lines arranged to form a chevron pattern; bordering the chevrons are two similarly impressed lines on shoulder and below rim.

FIG. 4. Height 15, rim diam. $11\frac{1}{2}$, base 6 inches. Medium coarse ware, brown to red, surface striated with tool marks, not polished. On rim and shoulder a row of 'finger-tip' impressions. A common type on the site.

FIG. 5. Height $12\frac{1}{2}$, rim diam. about $9\frac{1}{2}$, base about $5\frac{1}{2}$ inches. One side of vessel from rim to base. Black ware, surface polished. Ornamented with a series of triangular punch marks between deeply incised lines, forming a chevron pattern, in three rows, the upper row like a 'Vandyke' collar round the neck, the lower coming within an inch of the base; the middle and lower row of chevrons end abruptly as appears on the photograph. Pieces of a number of similarly ornamented vessels were found.

FIGS. 6, 7, 8. Small bowls of red coated ware. Fig. 7 has three raised cordons round the body. Heights respectively $3\frac{1}{2}$, 3, $3\frac{1}{2}$ inches.

FIGS. 9, 10, 11. Small pots of urn-like type, grey to black ware, with 'finger-tip' ornament on rim and shoulder. Common on the site. Heights respectively 5, $5\frac{1}{2}$, 4 inches.

The Scottish Regalia and Dunnottar Castle

By WALTER SETON, D.Lit., F.S.A.

[Read 17th February, 1921]

AMONG a large number of comparatively unimportant Scottish documents purchased recently from a dealer at Hove was found one folio sheet of considerable interest on account of its connexion with the saving of the Regalia of Scotland in 1652. It is the original draft of the conditions of surrender of the Castle of Dunnottar by Captain George Ogilvy of Barras to the Parliamentary troops commanded by Colonel Thomas Morgan.

The historical setting of the incident is fairly well known, but it may be well to recapitulate it. The Regalia of Scotland, Crown, Sword, and Sceptre were placed by the Earl Marischal for safety in his stronghold Dunnottar, along with the chief Royalist papers and the household belongings of the King. Captain George Ogilvy of Barras was placed in command with a quite inadequate garrison and insufficient provisions. The Parliamentary army, knowing of the transfer of the Regalia and the King's goods to Dunnottar, besieged the castle from September 1651 until its ultimate surrender in May 1652.

Fortunately, however, they were cheated of the more important objects of their quest. The King's papers were carried right through the Parliamentary lines stitched into a flat belt and concealed on the person of Anne Lindsay, a kinswoman of the gallant Governor's wife. The Regalia were also removed, and buried under the altar of the Kinnett Parish Church, the minister of which was Mr. Grainger; and there they remained until the Restoration.

It is unnecessary here to traverse afresh all the ground relating to the rather sordid controversy, which went on until after the death of all the principal actors. There can be little doubt that George Ogilvy, who was ultimately rewarded with a baronetcy, and his lady had a large part, probably a determining part, in the preservation of the Regalia.

Doubtless they could not have done it without the courage and discretion of the minister, Mr. Grainger and his wife. The

most dubious share in the whole matter was that of the Keith family, especially the Dowager Lady Marischal.

The final terms of surrender, as signed by Colonel Thomas Morgan, have been published in the Rev. D. G. Barron's book *In Defence of the Regalia 1651-2; being selections from the Family Papers of the Ogilvies of Barras*.

It is certain that the present document is an earlier one than the final document, because (1) it is clearly an unsigned draft, (2) alterations made in it have been duly carried into the final document, (3) a later date of surrender, viz. 26th May, is given in the final document. The differences can best be seen by comparing the two.

Barras Document

'Articles of Agreem^t between Collo: Tho: Morgan in the behalfe of y^e Parliam^t of y^e Commonwealth of England, And Capt George Ogilvy Gouverner of Dunnotter Castle for y^e surrender theare of'

j. Thatt the said Cap^t Ogilvy deliuer vp vnto mee the Castle of Dunnotter, with all the Ordnance Armes Amunition provisions & all other vttsells of warr for y^e vse of y^e Parlyment of y^e Commonwealth of England, vpon wednesday the 26 Instant by nine of the Clocke in the morning without wast or Imbasellment.

2. That y^e Late kings goods with the lord Marshalls and all other goods within the said Castle shall be deliuered to mee or whom I shall apoynt for y^e vse of the parlyment of y^e Commonwealth of England.

3. That the Crowne & Scepter of Scotland, together with all other Ensignes of Regallitie be deliuered vento mee or a good Account theareof, for the vse of the Parliament etc.

4. That vpon the true performance of the formenshioned Articles, Cap^t George Ogilvy

Draft

[No heading]

i. Thatt the Castle of Dunnotter with all the Ordnance Armes Amunition and provision and all other vttsells of warr be deliuered to mee or to whom I shall apoint for y^e vse of the parlyment of the Commonwealth of England vpon tuesday the 25 Instant by Tenn howers in the morning, without wast or Imbaslem^t.

2. That the Late kingis goods with the Lord Marshalls of Scotland and all other goods within the said Castle, shall be deliuered to mee or any whom I shall appoint for the vse of the Parlyment of the Commonwealth of England.

3. That the Crowne and septer of Scotland together with all other Ensigns of Regallytie be deliuered vnto mee or any whom I shall apoynt for the vse of the Parliament of y^e Commonwealth of England.

4. That (vpon the true performance of the aboue mentioned articles) Cap^t George Ogilvie with

with the officers and souldiers vnder his commaund shall haue Liberty to march forth of the said Castle att the hower Apoynted with Flying Coll^r Drom beateing match lighted, Completely Armed the Distance of one mile, theare to lay downe theire Armes, and to haue passes to goe theire own homes and theare to liue without molestation provided they act nothing preiudiciall to the Com^wwealth of England.

5. That the said Cap^t Ogilvy shall (free from sequestration) inioy all the personall Estate which he hath now without the Castle of Donnotter, and all such nesserarie household stufe of his owne which is now in y^e Castle, as shall be thought fitt by mee, or by them whom I shall Authorise to deliuer them vnto him.

Th^o Morgan

Blackhill att the

Leager 24^o May
1652

the officers and souldiers vnder his commaund shall haue Liberty to march forth of the said Castle att the hower appoynted, with Flying Collours, Droms beateing, match lighted compleately Armed, The distance of one mile, theare to ly downe theire armes, and to haue passes to goe to theire owne homes, and theare to liue without Molestation, provided they act nothing preiudiciall to the Commonwealth of England.

5. That¹ the said Cap^t Ogluiy free from seq[uestration] shall inioy all that personall estate which he hath now without the Castle of Dunnotter and all such nesserarie household stufe of his w^{ch} is now in the Castle, as shall be thought fitt by mee or by them whom I shall Authorise to deliver the same vnto him.

The two most important differences are in the alteration of the exact day and hour of surrender (Article 1) and the provision as to the Regalia (Article 3). The addition of the words 'or a good account thereof' are clearly the work of Ogilvy or of Sir Robert Graham and Colonel David Barclay, who treated with the Parliamentarians as to the terms of surrender. Some writers have suggested that Capt. Ogilvy did not himself know of the removal of the Regalia and still less where they were concealed. The addition of this saving clause indicates that he was perfectly well aware that the besiegers were to be cheated of their coveted prize.

It is not possible to determine the person in whose handwriting the draft is. It is not Captain Ogilvy, nor is it Colonel Morgan. It may have been Graham or Barclay, or some clerk. But that does not much matter: the main thing is that the Regalia were saved.

¹ MS. reads 'the Gourn^r aforesaid' deleted and replaced by words given above.

DISCUSSION

Bishop BROWNE had been interested in the matter and had hoped to see the owner of Dunnottar present. He was surprised that the words in the draft 'or a good account thereof' were left standing. The writer of the draft either did not know the regalia had been taken away or did not quite understand when he was so informed. The greatest care had been taken of the documents at Dunnottar, and complete photographs of the castle as it stood at the present time had been prepared for a sumptuous publication.

Mr. LYON THOMSON was also familiar with the castle, and suggested as a possible explanation that the commandant was supposed to have destroyed the regalia to avoid handing the national treasure over to the English. Hence he was required to render an account and possibly to hand over any money received in exchange.

The PRESIDENT had been equally puzzled by the phrase quoted, and was not satisfied with the explanations offered. As no one could have been deceived by it, he could only conclude that there was something else behind it.

Roman Remains at Welwyn

By Major G. M. KINDERSLEY, O.B.E.

[Read 9th June 1921]

THE discoveries at the Grange were made below the tennis-court in a garden that slopes down to the Hitchin road and the river Mimram; and when the terrace at the top of the slope was under construction some thirty years ago, some Roman relics came to light and are now in the Hertford museum. Immediately opposite, on the other bank of the river, are the foundations of a Roman villa in the garden of the Manor House.

The first of the present series of finds was made early in 1920 when a trench was being dug for a water-pipe, and regular excavations were undertaken about Christmas. The relics lay at an average depth of 3 to 4 ft. on the gravel subsoil, where the soil had not been disturbed in banking up the tennis-court; and the graves to which they belonged evidently formed part of a considerable cemetery, which will be further investigated in due course.

Fig. 1. All these objects belonged to one burial, the cinerary urn being of small size. In front of the bust (see figs. 2, 3) is a bronze and blue enamel ring, and the other articles from left to right are:

Nails probably belonging to a wooden chest.

Smooth slab of stone, perhaps a palette for unguents.

Pottery jug, the handle missing.

Long-necked glass bottle for unguents.

Small saucer made of the bottom of a vessel.

Vase of pottery, blue grey.

Neck of a large glass bottle and, in front, part of the lip of a yellow glass vessel.

Fragments of a green glass jug, like fig. 4.

Pieces of iron, perhaps hinges of the chest in which the whole was enclosed.

Figs. 2, 3. Two views of 'pipeclay' bust of a woman, retaining traces of fabric and fragments of a bronze necklace found in position (white mark on fig. 3). This seems to be the first discovery of the kind in Britain, though figurines of Venus



FIG. 1. Grave Group. Welwyn



FIG. 2

FIG. 3

Pipeclay bust of a woman, Welwyn ($\frac{1}{2}$)



FIG. 5. Roman Pottery, Welwyn



FIG. 6. Roman Pottery, Welwyn

standing on a hemispherical plinth are fairly common in London and elsewhere, as at Wroxeter (*Report*, ii, 19). It is no doubt of Gaulish manufacture and may have come from St. Rollat-en-Rémy.

Fig. 4. Three square bottles of bluish-green glass, of a kind often used for cinerary urns (as *Archaeologia*, xxvii, 434). Max. height, 8 in. They were found together and may have formed part of the grave-furniture just described.

Fig. 5. A burial set of pottery, the jug and vase being found



FIG. 4. Glass Bottles.

inside the cinerary urn, which is 11 in. high. The dish on the right is $6\frac{1}{4}$ in. in diameter.

Fig. 6. Another burial set, the cinerary urn being 12 in. high. The cup is 2 in. high, and the dish on the right $6\frac{3}{4}$ in. in diam.

Pieces of plain Samian pottery were found in various graves, all dating from the second century. Mr. A. G. K. Hayter, F.S.A., has kindly communicated the following notes on the potters' stamps :

ALBVCI on Dragendorff's form 31. A potter of Lezoux who made decorated and plain wares, including Drag. forms 79 and 80. Date about 140-180 A.D.

CETTUS FC. A Lezoux potter : same stamp at Carlisle, and

from Leadenhall St. (in possession of Mr. Vollam Morton). Dated at Wroxeter (1913) not later than Hadrian (117-38 A.D.).

CINTVSSA. Plain-ware potter only, assigned to Lezoux by Walters (*Brit. Mus. Cat.*): made Drag. forms 18/31, 27, 33. Found at Rheinzabern in a grave-group with potters of 100-50 A.D., as the above forms also suggest.

DIVICATVS. Probably a Lezoux potter: found at Newstead in second period, 140-80 A.D., and at Wroxeter (1913), with pottery mostly of late second and third centuries.

DISCUSSION

Mr. REGINALD SMITH said the most interesting item of the exhibit was the pipeclay bust, which dated from the latter part of the first century. The Samian dishes might be referred to the early second century, and there were three noticeable pieces of other wares: the cinerary urn was more British than Roman, though doubtless made after the Conquest; the vase of 'Upchurch' ware had a sharp angular shoulder seen also on Belgic blackware of early date; and the small 'pedestal' urn recalled the characteristic British cineraries of Aylesford. Roman grave-furniture was by no means uniform, and a jug or vase could not be expected with every cremation. Besides those on exhibition, Major Kindersley had found many pieces of pottery in his garden; and it would be useful to plot on a six-inch map the numerous burials of the period found in Welwyn and its neighbourhood.

Mr. PAGE looked upon Roman Welwyn as a hallowed place: there were many burials, but so far only one building, the villa in the Rectory garden. All the burials were cremations, and the latest date given by the pottery and coins was the third century. It therefore ceased to be used for burials before the time of Constantine. He had long intended to map the extraordinary number of burials, and thought there was no parallel site in Britain.

The PRESIDENT said Major Kindersley evidently realized the importance of recording the association of pottery and other objects in the graves: it was imperative to keep together the whole contents of each interment, in order that contemporary types might be determined. To dig up one's own tennis-lawn entailed great self-denial and enthusiasm for archaeology, and results had justified the present undertaking: further excavation might show in what the peculiarity mentioned by Mr. Page consisted. Some of the pipeclay figures were evidently made for cult purposes, and he remembered a charming gabled altar of the ware in Leyden museum. The bust was of higher artistic value than usual, though the face was somewhat distorted; and he did not share the opinion that it was originally dressed. The cloth fragments rather indicated that it was wrapped up at the time of burial.

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A Prehistoric Invasion of England

By O. G. S. CRAWFORD, B.A., F.S.A.

IN his account of the leaf-shaped bronze swords of the Hallstatt period, the late M. Déchelette wrote: 'Doubtless one might ask whether this weapon might not have been brought to the British Isles by the first Celtic invaders, but that is purely conjectural (*une conjecture fragile*), for it is difficult among the British finds of the same period to detect any really characteristic analogies' (vol. ii, pt. 2, p. 724). The same paragraph points out that bronze swords of identically the same type have been found in regions as widely separated from each other as Scandinavia, Bohemia, and Ireland, to which one might add Finland and Southern France. The conclusion is irresistible that these swords were derived from a common centre of dispersal, and that they were not evolved independently in each region. Had the evolution taken place locally there might have been similarity, but not *identity* of type. I propose to bring forward evidence in support of the hypothesis that, towards the close of the Bronze Age, the British Isles were invaded by the first wave of Celtic-speaking peoples, bringing with them leaf-shaped bronze swords, many other entirely new types of bronze objects, and at least two types of pottery new to these islands and evolved somewhere on the Continent. I suggest that these invaders may have been Goidels, arriving about 800-700 B.C. Possibly the new types under review may not all be strictly contemporary; and there may have been more than one wave of invasion. But there can, I think, be no doubt that an invasion on a large scale took place at about this time.

It is probably true to say that after the invasion of the Beaker-folk there was a long period of peaceful development. In Ireland, where they never came, the primitive, round-bottomed neolithic bowl slowly evolved into the typical Irish food-vessel. In England the same type of bowl evolved, under the influence of the beaker, into the food-vessel with an overhanging rim. In both countries

¹ In vol. ii (Hallstatt), p. 588, note 1, he says: 'The date of the first invasion of Britain recognized by Celtic scholars—the Goidelic invasion—is so uncertain that one cannot determine the type of sword used by these first conquerors.'

knife-daggers acquired precocious sockets and grew into spear-heads of a type peculiar to these islands. Flat bronze axes developed side-flanges and stopridges, and so became palstaves. This development resulted, as one would expect, in a number of similar but by no means identical types. The palstaves of Hampshire and the Isle of Wight, for example, can all be traced back to the flanged celts of Arreton Down; and there is evidence that they were made on the spot from raw material imported by sea. In the Southampton Museum is a clay crucible found near the town in association with palstaves.

Quite distinct types of palstaves were evolved in Sussex and in the north of England, and the types are almost entirely confined to the regions in which they were evolved. All this implies a considerable development of trade in copper and tin, which in turn implies peace and plenty. The rarity of exotic types throughout points in the same direction and rules out the possibility of invasion while these developments were taking place.

It is of the greatest importance for my present purpose to fix as closely as possible the limits in time of this long period of security; but this is extremely difficult. I think, however, that one may say it ended with palstaves, and that the invaders and socketed axes came in together. That does not mean that palstaves ceased to be made and used afterwards, for we know that they survived for a long time, particularly in certain regions. Nor that no socketed axes were known before; it is possible that some (perhaps the bigger ones) were evolved in this country. Generally speaking, however, there can be no doubt that socketed axes gradually superseded palstaves; and it was during the transition from the one to the other that the invasion began.

The evidence upon which the invasion-hypothesis is based consists of associated finds, principally hoards, such as those exhibited on 10th February 1921.¹ It is impossible to prove that any given selection of hoards is contemporary, and it is probable that the exhibits are *not* all contemporary. I have, however, collected together notes on some others in which the same types of objects recur again and again, and which may all, I think, be placed within the same not very lengthy period. I have examined nine associated finds which contain tanged bronze razors, because it seems reasonable to suppose that these razors were contemporary—a supposition which is completely borne out by their associations; and I have chosen six objects which I regard as being exotic,² taking about

¹ To be published in *Archaeologia*, lxxi.

² By an exotic object is meant one highly specialized in character whose early forms are not found in Great Britain.

half a dozen instances of the discovery of each, generally in association. Of course, a great deal depends upon whether it is agreed that all the objects thus passed in review are really contemporary. It would take too long to attempt to prove this in detail, nor can the evidence be given in full.

The usual type of razor, which may have been developed in this country or in France, is tanged, with two blades separated by a stem or thickened midrib, and sometimes with a small perforation at the top. The shape is like that of the leaves of the small water-lily, with a notch at the top. The great importance of these razors is that they provide an invaluable link between the hoards on the one hand and pottery, barrows, and earthworks on the other. Razors of the type described have been found in the hoards at Feltwell Fen (socketed axes, tweezers, etc.); Wallingford (socketed axe, knife, and gouge); Heathery Burn (socketed axe and mould for another, knife, gouge, chisel, tweezers); Dowris (socketed axes, knife, and swords); Llangwyllog, Anglesey (tweezers); Fresné-la-Mère, Falaise (socketed spearhead, hammer, gold torc of Yeovil type). They have been found in the two small rectangular entrenchments which General Pitt-Rivers proved to be of the Bronze Age—South Lodge and Martin Down, in Cranborne Chase. In both these cases numerous sherds of pots ornamented with raised ribs of clay and finger-tip impressions were found; these sherds were not mere surface-finds, but were closely associated with the razors in the mixed 'rapid' silting of the ditch. On the bottom of the ditch of South Lodge Camp was found a large complete urn of this type, with raised vertical ribs, ornamented with finger-tip impressions. At the same depth was found the razor. Now the fashion of ornamenting pottery in this way died out completely—at any rate in the south of England—after the Stone Age. In any typical collection of pottery of the Early and Middle Bronze Age the ornament is generally applied with cord, never with the finger-tips. I exclude, of course, beakers, which had their own kind of decoration, generally oblong punch-marks, only very rarely finger-tips. In a barrow at Roundwood in Hampshire, which I excavated very carefully last summer, out of over a hundred sherds, nearly all ornamented and representative of a large number of different vessels, not a single one was ornamented with finger-tips. In the urn-field at Dummer, not five miles distant, finger-tip ornament was the most usual, and there was no cord-ornament. Both in urn-fields and in some barrows, finger-tip pots are extremely common, especially in the Lower Thames and Hampshire basins. I know of no urn-fields which contain urns ornamented with cord or in the earlier Bronze Age

fashion ; and this marked distinction must, I am sure, indicate the arrival of new people with new customs. Montelius places urn-fields in his last period.

Associated also with these finger-tip pots and the razor, there were found in the ditch of South Lodge Camp a number of sherds of the globular urns, which Lord Abercromby has called the Deverill-Rimbury type. These, he argues, must have been introduced from abroad by invaders, though he is inclined to minimize the extent and importance of the invasion. I fully agree that the type was thus introduced, but I think there is collateral evidence to show that, both numerically and otherwise, the invasion formed at any rate one wave of a large and important migration which, as a whole, was responsible for more than Lord Abercromby is willing to admit.

We have, then, two new types of pottery, and we have lastly the new type of earthworks in which they were found. These small, approximately rectangular camps are a remarkable achievement for the Bronze Age, not on account of any difficulties in laying out or constructing them, but rather because of their strangely methodical symmetry. One cannot help associating their makers with the makers of the Italian *terremare*, the ancestors of those Romans whose square military camps were later on to spring up close by on the same downs of Cranborne and Gussage.

Let me repeat, for the sake of clearness, the conclusions reached at this stage in the argument. We have, on the one hand, a great mass of pottery of a uniform character, ornamented with finger-tip impressions, found over a large part of Southern England ; we have pottery of another type—the Deverill-Rimbury type—confined to Wessex ; and we know that both were contemporary because both have been found together in the square camps of Cranborne Chase and elsewhere in barrows. We cannot account for the appearance of all three together except by postulating an invasion. The discovery of bronze razors associated with them enables us to go farther, and to say that some of the hoards of bronze implements were contemporary with these two types of pottery and with the camps. It remains to be seen therefore whether the hoards confirm the invasion hypothesis demanded by the pottery and camps. They will do so, I think, if they are found to contain a great preponderance of exotic objects—more, that is, than could be accounted for by trade. This, I submit, they do.

That the hoards in question are contemporary with the razor-pottery-square camp complex will be clear from a critical examination of the evidence, set forth in summary form below. The

proof rests on the assumption that if $A = B$ and $B = C$, then $A = C$, the sign of equality signifying contemporaneity, and A, B, and C representing objects and groups of identical types.

Perhaps the most striking exotic object is the winged axe (not to be confused with the flanged axe of the Early Bronze Age, sometimes, but incorrectly, called a winged axe). Winged axes occur in a hoard from Clothall in Essex, with nine socketed axes and two sword fragments; in a hoard from Minster, Thanet, with socketed axes and a socketed knife; and a hoard consisting almost entirely of winged axes was found at Donhead, Wilts., with a mould for socketed celts. A mould for winged axes was found near Amiens; a single specimen from Radkersburg in Styria is almost indistinguishable from a French specimen in the same room at the British Museum. Winged axes are the normal type in Central Europe; there are several varieties, but they all belong to the same species.

When socketed axes came into fashion, the winged-axe people ornamented the face of the new socketed axe with a pair of semicircular ribs in imitation of the appearance of the folded wings. Many examples could be collected of their occurrence in Britain. They occur in the Minster hoard and in most of those found round the Thames estuary; and also at Heathery Burn in Durham. They are so common both in hoards and as isolated specimens, that I have not troubled to enumerate instances. One was found at 'Old England', Brentford, not in the Thames itself, but in the marsh on the north bank. It is clear that they were evolved from the winged axe and that they were made by people whose usual weapon up till then had been the winged axe and *not* the palstave proper. The rarity of winged axes makes it certain that they were never the *usual* weapon of the inhabitants of this country. On the other hand, winged axes *were* the usual weapon of the people of Central Europe. It follows, therefore, as a matter of course that the socketed axe with vestigial wings added as ornament was the invention and work of a Central European people. Possibly examples of the earlier type (i. e. winged axes) were introduced by traders. Peaceful penetration, as we know, is often the prelude to invasion.

I must pass rapidly over the other examples of exotic objects. They are:

(1) Double-hooked bracelets of thin bronze wire. Heathery Burn; Anglesey; Lake of Bourget; Venat (Charente); Manson (Puy-de-Dôme).

(2) Bronze buckets. Heathery Burn; Dowris; Morbihan; Bologna; Hallstatt.

(3) Winged chapes. Llyn Fawr ; Wilburton ; Sion Reach ; Ebberston (Yorks.) ; and the Departments of Drôme, Jura, Auvergne and Vaucluse in France.

(4) Bronze buttons. Reach Fen ; Anglesey ; Kensington ; Heathery Burn ; Hallstatt ; and the Swiss lake-dwellings (very abundant).

(5) Certain bugle-shaped objects which were possibly chapes for dagger sheaths. Sion Reach ; Minster ; Reach Fen ; Roseberry Topping ; Broadward ; Melburn (Cambs.) ; Alderney ; and Notre-Dame-d'Or.

(6) Bronze tweezers. Sion Reach ; Feltwell Fen ; Heathery Burn ; Anglesey.

(7) Small bronze rings. Common in Britain, and the Swiss lake-dwellings, and at Hallstatt.

The evidence of all these contemporary objects very strongly suggests that they were brought here by invaders, and it points to eastern France or Switzerland or some adjacent region as the place of origin. Let me next consider some still more suggestive finds, which will not only strengthen the evidence for invasion but will indicate more precisely the home of the invaders.

One of the most remarkable hoards found in the British Isles was on exhibition on 10th February. It was found in the small lake of Llyn Fawr in Glamorganshire. The evidence for the association—and therefore contemporaneity—of all the objects in it is, to my mind, quite satisfactory ; though the spearhead cannot be proved to have been found in association with the rest. The hoard is unique in many ways. It is the first instance in north-western Europe, so far as I am aware, of typical bronze weapons of the Bronze Age being found associated with objects made of iron. Further, one of those iron objects (the sickle) is clearly modelled on one of the bronze sickles found with it ; the forging of it must have been peculiarly difficult as its prototype was cast in a mould.

One of the objects—the razor—is almost unique in Great Britain ; the only exact parallel I know of is one from Sion Reach in the British Museum (case 52). It can, however, be paralleled in France, and an example closely similar to the Llyn Fawr specimen is figured by Déchelette. It was found in a grave at Magny-Lambert (Côte-d'Or) with a skeleton, a cordoned bronze bucket (like that from Weybridge presented to the British Museum by Mr. Dale) and an iron spearhead. Perhaps the most interesting fact of all is that it is again figured by Déchelette on the plate at the end (vol. ii, pl. vi, fig. 10) illustrating objects typical of the First Hallstatt Period (B. C. 900-700). There is now, therefore,

absolute proof of the discovery in Britain of yet another object belonging on the Continent to the Early Iron Age. This is, however, the first occasion on which such an object has been found in clear association with typical Bronze Age objects ; and it should be gratifying to those who have so long been expecting something of the kind.

I have mentioned Sion Reach as the site where a razor like that from Llyn Fawr was found. The site is a most remarkable one and it appears highly probable—if not certain—that a pile-village existed there on the marshy ground (called 'Old England') between the Brent River and the Thames. During the construction of the Great Western Docks in 1859-60 and at intervals ever since, many bronze and other objects have been found there. These objects are now mostly in the British and London Museums and in the Layton Bequest at the Brentford Public Library. These objects are as follows :—razors, pins (roll-headed, cone-headed, and hammer-headed), bugle-objects, tweezers (ornamented with hatched triangles ▲), small rings, winged celt, socketed axes, socketed spearheads, socketed knife and pendant. There are at Brentford eight bronze leaf-shaped swords ; their exact provenance is uncertain, but they were found on the land, and not dredged from the river-bed, and it is therefore not improbable that they were found on the Old England site. There are also three curved one-edged knives of the typical lake-dwelling type. Objects of the La Tène period from Old England are not at all numerous. I do not know of any which can be positively stated to have been found there. The connexion of these finds with the hoards already referred to will be obvious. Most of the Old England objects occur again in the Heathery Burn cave, and all of them can be paralleled in the Swiss lake-dwellings. This parallelism is most striking ; it is not a mere resemblance, it is absolute identity of type. The razors reported from Llyn Fawr and Sion Reach are merely single examples of a type which occurs again and again in Switzerland and has many variant forms. Further parallels can be found ; I have compiled lists which bring out the close resemblances between the English and the Swiss lake-dwelling cultures. That one of the English sites should be the probable site of a lake-dwelling makes the resemblance still more suggestive.

I have now brought to notice many facts which suggest an invasion from France or Switzerland at about the time when iron was coming into use. At precisely this moment the lake-dwellings of Switzerland seem to have come to an end. So far as one can gather from a study of the literature and of the British Museum collections, there appear to have been no lake-dwellers in Switzer-

land during the later Hallstatt Iron Age. Can they have been driven out by other invaders from the east? and was it the lake-dwellers themselves who invaded these islands? Sir Arthur Keith has examined skulls from the Thames at Old England which are, he says, of the typical Swiss lake-dwelling type, and quite distinct from that much earlier variety characteristic of the beaker-folk. But the Alpine type of man had, of course, a wider distribution and was not confined to the neighbourhood of the Alps.

Sir Arthur Keith formed his opinion on anthropological grounds, quite independently of archaeological evidence, nor probably was he aware of the close connexion of the Old England bronze types with those of Switzerland. That similar conclusions should be reached by independent workers in different fields of research is somewhat remarkable, and is a strong argument in favour of the truth of those conclusions.

The distribution of leaf-shaped swords suggests many things. In the first place they are quite common in Ireland; and examples occur in almost every part of Europe (probably the evolution of the type took place in Bavaria; it certainly did not take place anywhere in these islands). It is worth inquiring whether it is possible to equate any prehistoric invasion based on purely archaeological grounds with any similar migration demanded by philologists. Can we, for example, say when the Goidelic-speaking Celts first reached Ireland? Lord Abercromby, I believe, maintains that the beaker-folk were the first Aryans and presumably, therefore, were Goidels. But the beaker-folk never reached Ireland, the home of the Goidel; and it is therefore very difficult to accept this view. After the coming of the beaker-folk no other invasion has hitherto been recognized until well on in the period of La Tène, when the Brythonic-speaking peoples presumably arrived. I therefore suggest that these invaders, whom I may call the leaf-shaped sword people, were Goidels and that they subdued and settled in Ireland.

Continental archaeologists incline to the view that the beaker-folk spoke an Aryan language, and I am quite open to conviction; but there are difficulties in adopting either hypothesis. The complete absence of beakers in Ireland (barring one or two 'sports', mostly in the north-east, opposite the Scotch coast) makes it extremely difficult to believe in an invasion large enough to account for the Goidelic language of that country. On the other hand it must be admitted that the surviving traces of Goidelic place-names in southern Britain are very scanty. If the Late Bronze Age invaders spoke Goidelic, one would certainly expect to find more traces of that language in the area where their

archaeological remains are so abundant. But this rarity of Goidelic place-names might equally well be brought forward to prove that the beaker-folk (who settled thickly in the same area) did not speak Goidelic. There is, of course, a third alternative—that Goidelic was evolved after the invaders reached here. This hypothesis has been put forward ; and it must be left to philologists to throw more light on the problem.

There can be no doubt that Central Europe was in a very disturbed state at the time when iron was coming into use. Invaders were pouring down into Greece—the first Aryan-speaking peoples to come there—Italy was also being overrun from the north. There are hints that the invaders wandered very far afield indeed. Archaeology suggests that people with affinities in Central Europe got to Kiev in Russia (where lake-dwelling types of pins occur), Finland (leaf-shaped sword), and Ireland. A closer study of type-distribution may some day convert these suggestions into certainties.

Second Report on the Excavations at Stonehenge

By LT.-COL. W. HAWLEY, F.S.A.

[Read 23rd June 1921]

WHEN I presented my Report last year, work was about to begin upon some stones on the north-east of the outer circle of Stonehenge. These formed a group of four monoliths, numbered from west to east, 29, 30, 1, and 2. They carried lintels, survivors of the series which once capped the stones of the outer circle. Nos. 1 and 2 had moved out of position, leaning badly outwards, and had drawn with them the three lintels from their seatings to the danger of these and themselves. They would have fallen long ago had they not been supported by props which were beginning to decay, so it was necessary to attend to them at once.

Before work could be begun the lintels had to be removed, and when they had received their timber cradles they were lowered to the ground on the 15th June in a most satisfactory manner by the staff of the Office of Works, the operation only occupying an hour or two.

During the work the lintels were distinguished by letters A, B, and C from west to east. Lintel A rested between stones 29 and 30. Lintel B was over 30 and 1, and C over 1 and 2. Lintel A and the top of stone 29 were much weathered, but the other two had more or less escaped, and when lifted off revealed fine tooling by the ancient masons and showed the care taken in getting a level surface and exact fitting. The same was observable on the dowels of the stones and on the cups in the lintels to receive the dowels.

Not content with the security given by the dowels alone, the top of the stone had been chipped to leave elevated edges at the sides, so that the lintel rested in a shallow flat recess. Such careful fitting must have been done after the stones were erected; this could not have been effected unless the stones were worked in conjunction with one another, and even suggests that the lintel was slung so that it could be frequently tried until a sufficient degree of exactness had been arrived at. The same care in fitting was observable in the toggle joints which were somewhat weathered, but still fitted with sufficient accuracy to make it difficult to return the lintels to their former places.

The timber work and other preparations having been completed, work on the stones was begun on the 28th June, and the method of procedure was much the same as that explained in last year's Report. We used the registering frame, placing it around an area of 23 ft. by 18 ft. including the stones 1 and 30, and small areas were worked inside the larger one, distinguished by the letters including them.

On this occasion we stripped the turf and humus from off the whole of the large area before beginning the smaller ones and proceeding to deeper levels, so that objects in it could not drop down and become confused with things in the lower layers. Considering the extent of the upper layer the objects found were few in comparison with those at nos. 6 and 7 stones. There were the ubiquitous stone-chips : of these we had 398 of sarsen and 2,061 of foreign stones, the proportion of 5 to 1 (or a little more) being the same as observed before. Also there were 363 pieces of quartzite hammerstone. I might explain that the term hammerstone was given to them because they had evidently been collected for that purpose, though not actually used. It is a very hard variety of sarsen and occurs as water-worn nodules and small boulders all over Salisbury Plain especially in river valleys.

Bronze Age pottery fragments were in excess of those of the Roman period. There were sixty-two of the former and twelve of the latter, all in fragments crushed to sizes rarely greater than an inch and giving no information beyond the Bronze Age being the earliest period presented in the layer. There were five Georgian copper coins and a farthing of Charles II, an iron strike-a-light, and an iron knife of about the seventeenth century.

Three pieces of human skull were met with and one tooth. These occurred at a high level with no sign of burial, and might have been the remains of some criminal hanged there and left unburied, the few pieces finding their way into the ground. They were the only human remains found, but there were several fragments of animal bones which have been kept and tabulated.

Much of the upper layer was composed of finely crushed flint which was first met with on the west side of no. 1 stone, increasing and becoming deeper on the outside of no. 30, and farther west it showed a depth of from 15 in. to 24 in. and seemed to spread towards the interior of the circle of Stonehenge.

It is possible that the builders may have laid down rough flints to afford a firm foundation when moving the large stones, which may have crushed them. On the other hand, as there are no big flints embedded in the soil below, it would seem that the material was deposited in a state of flint gravel which would

have been necessary on account of the disturbed and muddy state of the ground whilst the work was going on. In this instance there were no objects in it, but later it was found to contain stone chips. The lower layers around both stones were of earthy chalk rubble with a few flints which formed the filling of the craters in which the stones stood. Finds in them were very few so I give the layers collectively; they are preserved and tabulated, as are all the others, according to their position and datum. They consisted chiefly of mauls, of which there were 36 of all sizes, varying from some quite small to others of 11 lb., 30 lb., and 43 lb. The latter is the biggest yet met with and is a nicely rounded specimen. It was found at the north-east corner of no. 30 stone, 51 in. below datum, and had been used as a packing-stone. The larger mauls were of very hard sarsen, and many of the smaller were of quartzite of a brown colour.

Two deer-horn picks were found in a broken state, one at a high level in front of stone 30 at 36 in. below datum line and the other to the north-east of the foot of no. 1 stone at 80 in. below datum. There were sixteen flint implements of a rough description, two flint hammers, ten roughly chipped flints, three flint scrapers, one borer, and two fabricators. A few fragments of foreign stone were met with which had crept down with the humus at the side of the stone and one was found amongst the rubble at 38 in. below datum line. No. 1 stone was the first to be excavated (fig. 1). This stone was peculiar and interesting, for there was no incline from the outside for bringing the stone up to its position. The crater in the solid chalk was reached at only 29 in. below datum line. It was very regular in form with sharp inside edge, the sides showing a steep, but not perpendicular descent.

It is difficult to say how the stone could have been set in the crater. Had it been tipped in, the chalk at the side would have been crushed, and indeed the whole crater might have been ruined. Had a timber platform been placed round the edge the weight of so large a stone might have displaced and crushed it. The stone is very regular in shape, the south side being practically a straight face and the north side is much the same, but a little undercut below ground level, so that it is well suited for insertion, but how this was accomplished is a question for consideration. It is hardly credible that so heavy a weight could have been slung and lowered. Wood was more likely to have been used than raw-hide ropes, but as both are perishable we cannot know if or how they were used. This stone was not very pointed, but it tapered sufficiently to help its adjustment.

The chalk rock at the bottom of the crater was of a naturally

crumbling description and was found to extend in this state some distance around when the pit for concrete was made. This might have been the cause of the stone shifting its position.

Forty-eight packing-blocks were found distributed around the

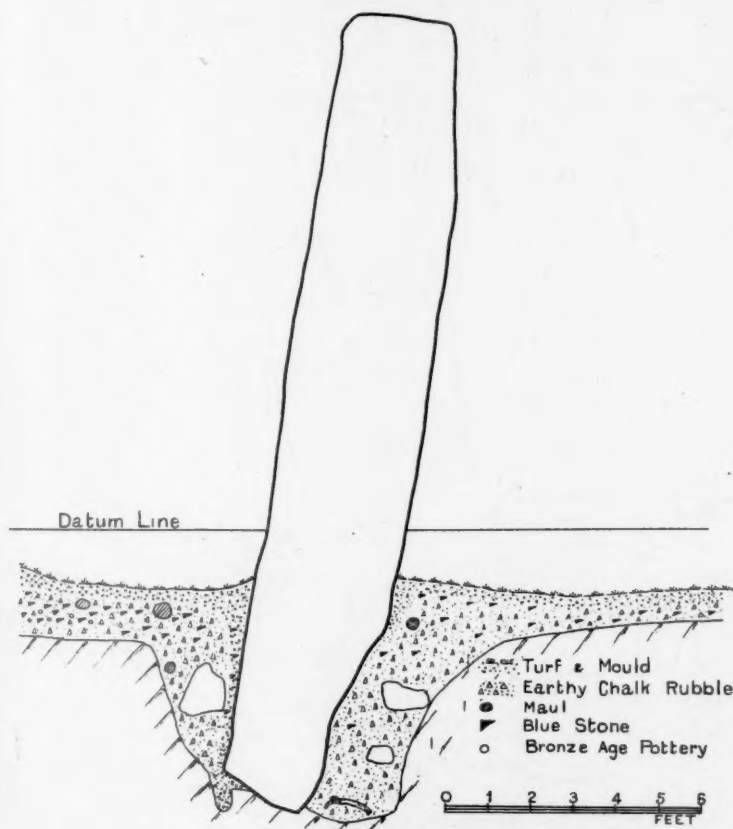


FIG. 1. Section through stone no. 1.

base, the greater number placed about the north-east face and north corner. They were mostly of sarsen, but about one-third were of glauconite and Chilmark ragstone. There was a post-hole on the south side of the base, not very well defined but sufficiently marked to assume that it was one, especially since it contained the substance of decayed wood.

No. 30 stone was next taken in hand (fig. 2). The lower layers were similar to those about no. 1 and were in earthy chalk rubble. When this was removed and the stone laid bare to the base, a crack, previously visible 19 in. above ground level, was now seen

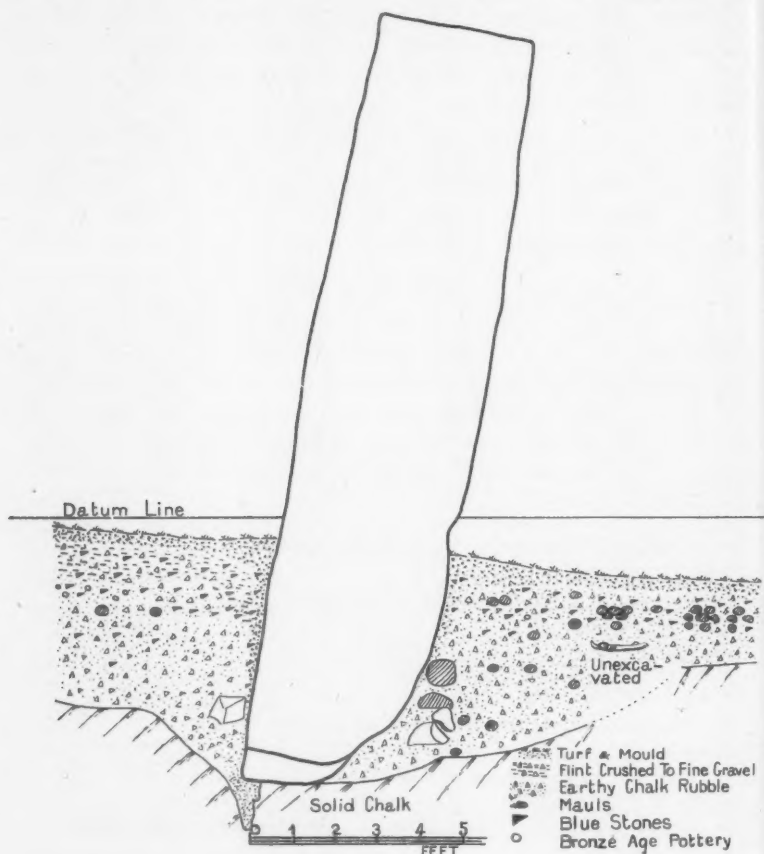


FIG. 2. Section through stone no. 30.

to extend in a downward curve to the centre of the base on the south side and to be $6\frac{1}{2}$ ft. in length. There was also a smaller crack on the west of the base which might have been caused by hammering the base of the stone to get the desired shape. This crack took a downward curve towards the centre for about $2\frac{1}{2}$ ft., but in neither case was it possible to ascertain how far into the

stone the cracks extended. The one on the east side appeared to be natural and to have existed when the stone was erected. Apparently it caused anxiety to the builders, for they seemed to

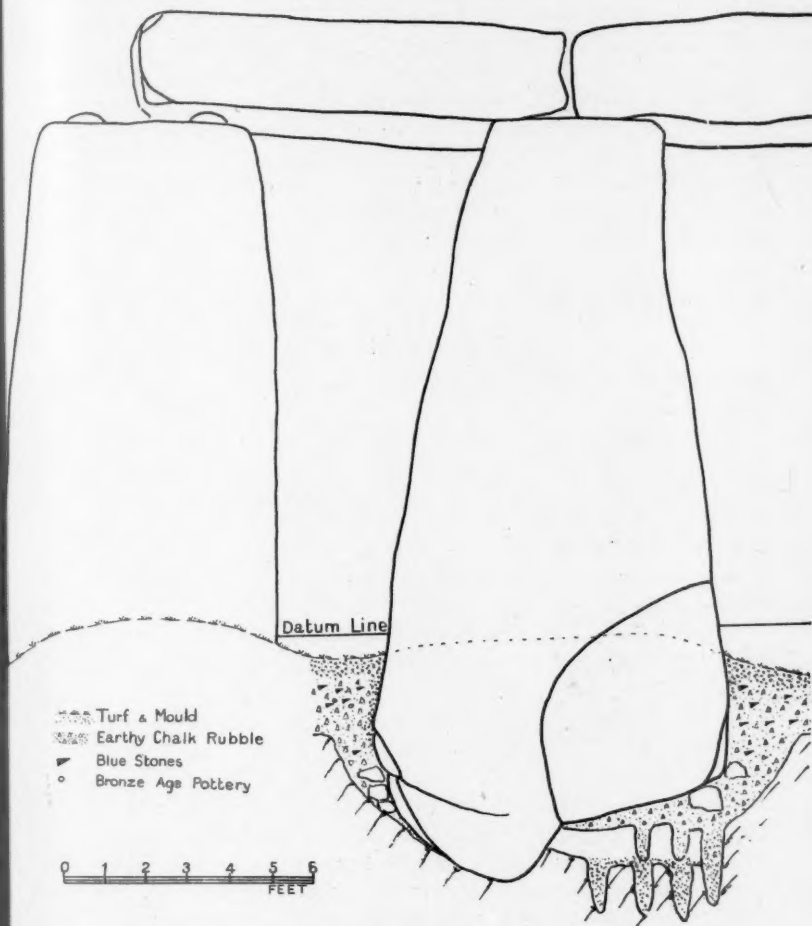


FIG. 3. Stones nos. 29 and 30.

have placed posts or perhaps wooden baulks under the curve to take the weight of the cracked portion (fig. 3). The holes for these posts were found and also those of a row of posts outside them, evidently to support the inner ones. There seemed to have been nine outer posts, but they were not well defined, as they ran one

into another from being placed close together. One hole descended 20 in. and others from 15 in. to 18 in., and they all contained the brown matter of decayed wood. The same precautions had not been taken with the other crack: nor were they necessary, as the west side of the base rested in a bowl-shaped depression, pressing the cracked end against the stone. These cracks, no doubt, caused the builders to abstain from trimming the base of the stone, leaving it heavy and cumbersome and adding greatly to its weight.

As a temporary measure baulks of timber were placed under the curve, as the builders had done long ago, but shortly afterwards all danger was averted by fixing two steel cables crossed round the base, binding the cracked portions tightly to the stone by means of screw bolts at the ends of the cables, and these remained on the stone when it was finally buried in concrete. The cracks were marked during the work but showed no sign of movement.

This stone must have shifted its position considerably on the west and north, as the humus had dropped down to the lower packing-stones.

The packing-stones around the base were very numerous: there were fifty-eight of them chiefly of glauconite and Chilmark ragstone, a few only being of sarsen. The employment of these mixed stones seems to point to sarsen being unavailable, except the pieces knocked off when forming the bases and tops of the stones; consequently stone had to be searched for and brought from distant places.

When quite exposed the base of this stone was found to be 75 in. from datum line. Two steel cables were passed under both stones and secured to their cradles, preventing them slipping down. They were then jacked slightly off the ground and brought to an upright position. A long rectangular pit was dug in the solid chalk to include them to a depth which left their ends 15 in. from the bottom. A foundation of reinforced concrete was put in until it nearly reached the stones, leaving room for an iron plate. This concrete was firmly set by the 21st August when the rectifying of the position of the stones was carried out. It was a long and tedious process, but by the 23rd a very good fit was made of lintels B and C. Lintel C was then taken down and B left over 1 and 30 stones. A bed of concrete was now put around both and when firmly set, the cradles and all supporting structures were removed and a scaffolding erected to aid in getting the final adjustment of the lintels. This was attempted on the 31st August but when lintel A was tried it could not be seated in its proper position. Evidently stone 29 had moved and the

only thing to be done was to treat it like the others, as the movement might continue and give future trouble.

DIABASE STONES

When excavating stones nos. 1 and 30 the disturbed area came very close to two of the foreign stones of the inner circle (nos. 31 and 49). Fearing that their stability might have been weakened, it was decided to put a concrete support about their bases on the north side, bringing it to a foot below ground level.

The depth of stone 31 below the surface is 46 in. and its total height 9 ft. 4 in. No. 49 is 46 in. below ground and its total height 9 ft. 10 in., datum line and ground level here being identical.

No. 31 has a curved or convex face on the north side down to the base and the edges of the sides are rounded off. No. 49 appears to have been a naturally very flat slab and retains the original brown crust on the face. The west side has been chopped away to make it narrower, or perhaps straight. There is a broken fragment 19 in. long at the base, still fitting against the stone, showing the original width there to have been 47 in. This fragment not having moved from its position seems to indicate that the stone may have been dressed after being set upright : there were, however, but few chips present, although many were found near by in the excavated area.

In the earthy chalk rubble about stone 49, to datum 27 in., were 3 sarsen fragments, 2 quartzite, 28 of foreign stone, a piece of a sarsen maul, a rough flint implement, and a flint flake : there were no other objects below this depth. Below the earthy rubble the stone stood in a shallow hole in the solid chalk with a little yellowish marl around it. The soil around stone 31 was similar, and contained 2 sarsen fragments, 1 of quartzite, 3 of foreign stone, and 3 slightly worked flints, and the bedding of the stone was similar to that of the other : there were no packing-stones in either case.

STONE 29

The excavation of stone no. 29 was begun on the 6th October in an area 12 ft. by 9 ft. included within the registering frame. Datum line and surface level were nearly identical. All the upper surface was removed as before and consisted mainly of the crushed flint previously mentioned. Below it was earthy chalk rubble to datum 19 in. or 20 in. where solid chalk was met with except at the crater in which the stone stood. There was a considerable number of stone chips both in the crushed flint and in

the thin layer of chalky rubble under it and, below this, solid chalk was met with at about 2 ft. below datum line. Besides the stone chips there were 5 pieces of Bronze Age pottery and 2 of Romano-British, 2 flint implements, 9 roughly chipped flints, 2 small sarsen mauls, and a broken one. The earthy chalk rubble was continued down the crater, forming packing matter amongst the blocks, and at the bottom was about a foot of white chalk rubble.

This stone proved to be the shortest yet met with, the base being only 55 in. below datum line. It had the same peculiarity as no. 1 in having no inclined plane starting from outside to bring it into position. The edges of the crater were found 2 ft. below ground, having sharp edges and resembling that of no. 1 in nearly every way. The packing-stones were met with very early, appearing when the turf was removed. There were forty-seven, and these were presumably numerous on account of the shortness of the stone. Two of them were very large flints, 19 were sarsen, and the remainder of Chilmark and Hurdcot ragstone. They were distributed all round the stone but were more numerous on the north side and north-east corner. Here, a number of them, occupying a width of 4 ft., was cemented together in a hard mass which gave much trouble in extricating them. The blocks were continuous from the top of the crater to the base of the stone but only the intermediate ones were cemented. At first it was believed that the builders had intentionally used cement, especially as this was a short stone and the outer side is always the weakest. A specimen was sent to the Office of Works and an analysis was made of it, but no proof was found that cement had been used. This and other considerations point to its being natural. Small patches of it had been noticed before, for instance at no. 6 stone, also in other places where it would have been of no utility, but wherever it occurred ragstone was present, and this being a limestone may be the cause. It may happen in this way. Organic matter on the surface would create carbonic acid in the soil below: rain-water percolating downwards would take up the carbonic acid which would dissolve some of the lime of the ragstone, forming a solution of carbonate of lime, which being diffused amongst the earthy chalk would set it hard and give the appearance of concrete.

Along the outside of the base of the stone on the south side there were post holes in the solid chalk. They began at the east corner and were arranged along the south face for about $2\frac{1}{2}$ ft. They were seven in number: one of them was oblong and about 8 in. wide, perhaps for a flat baulk of wood; the others varied

in diameter from 4 in. to $7\frac{1}{2}$ in. The arrangement of them much resembled those of stone 30 and contained the light substance of decayed wood. In addition to these, twenty of the packing-blocks were on the south side.

The stone ended in a bluntly-pointed base with the under sides sloping inwards and meeting about the vertical axis. The solid chalk sides at the bottom of the crater seem to have been cut to coincide with the slopes of the base. There were a great many natural cavities about the base, one being a hole penetrating 15 in.

The stone was secured with steel cables to the cradle like the others (pl. VII), and the pit for concrete about it formed a continuation of the long pit the others stood in. On the 20th October the stone was jacked up and the concrete foundation put in. This was firmly set by the 16th November, when lintel A was adjusted and fitted quite well. The concrete bed was put in and when that had set the stone was stripped and stood free (fig. 4).

The work, however, was not yet finished, as it was decided to give support to no. 2 stone in case the excavation of its neighbour might have weakened it. The stone had been from the beginning of the work strongly secured and propped, but now additional support was given. It was not necessary to move the stone, so the work was performed differently from the others. Pits were sunk to the base at the four corners of the stone, each including half a face and half a side. The pits were concreted in succession and the entire concrete bed so formed joined that of the other stones, forming a long solid bed.

The area excavated here was 12 ft. by 10 ft. The stone was wider and thicker than the others and the longest yet met with, the datum depth being $84\frac{1}{2}$ in. It had been brought into position by an inclined plane from outside. The loose soil was excavated in the pits in three layers: the first was in flinty and earthy chalk rubble, the second in earthy chalk rubble, and the third in white chalk rubble, and humus had descended at the sides of the stone. The finds were very few and, in addition to stone chips, consisted of 10 roughly chipped flints, 1 piece of Bronze Age pottery, 10 of Romano-British, 3 of medieval with green glaze, 1 oyster shell (datum 37), 12 sarsen mauls, mostly small but there was a large one weighing 35 lb. Near the bottom the stone stood in a hole in solid chalk 25 in. deep. The stone being so deep in the ground hardly required packing-blocks: there were ten small blocks of sarsen, probably only used for steadying the stone whilst it was being adjusted.

The concreting was finished on the 14th November and set firmly by the 6th December, when the stone was stripped (fig. 5). All the lintels were finally adjusted and the work was completed. It was in every way most satisfactory, and Sir Frank Baines and his staff may indeed be proud of their work, which has surpassed all that could be anticipated.

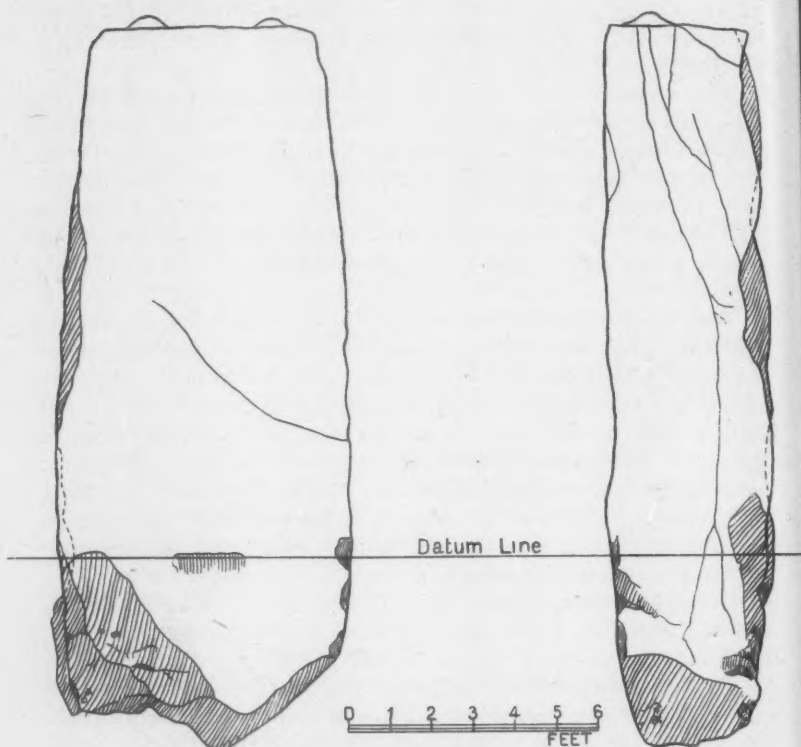


FIG. 4. Stone no. 29, after adjustment : S. and E. elevations.

AUBREY HOLES—BARROW DITCH

In my last Report I said we had excavated twenty-three Aubrey holes and that they were at regular intervals with the exception of one. I am now able to state that all of them are regular both in interval and line of circle. We were misled by coming upon a hole not far from the right one, but it did not resemble the others, being rough and irregular, and perhaps made

by a former excavator. Not being satisfied, I searched and found the other in its right place. Its dimensions are : depth 39 in., maximum diameter 38 in., and minimum diameter 57 in. In the humus over the hole were 7 sarsen chips, 11 of foreign stone,

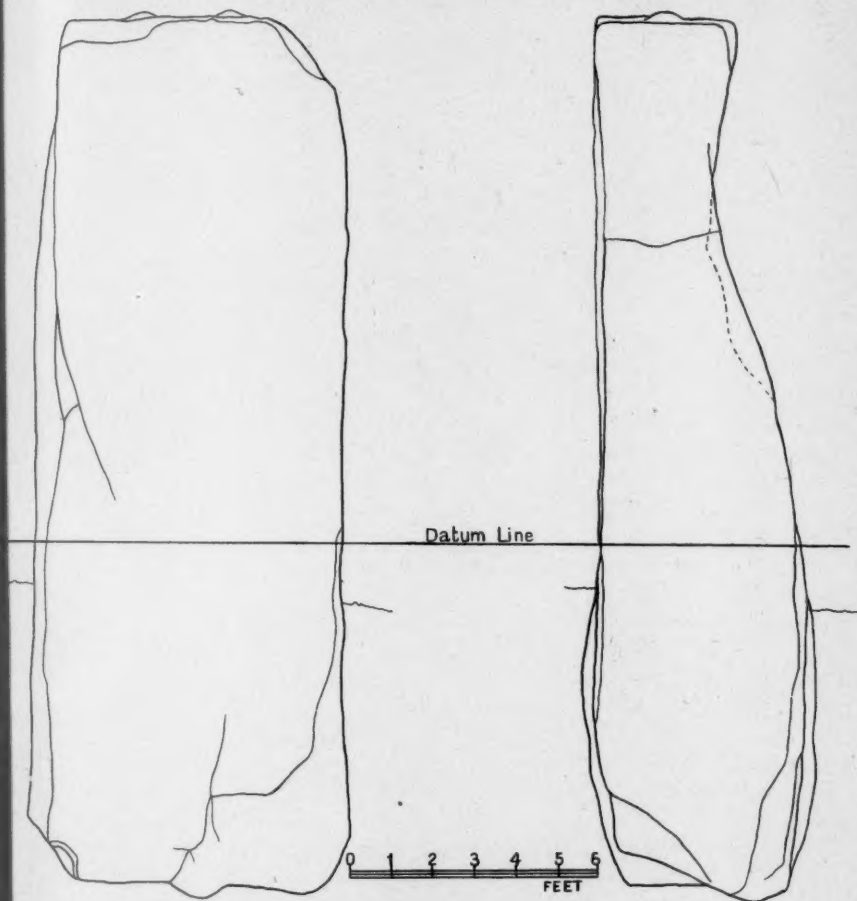


FIG. 5. Stone no. 2, after adjustment : S.W. and S.E. elevations.

5 of quartzite, 1 animal bone, and 2 roughly worked flints. Below the top of the hole but quite high up in it were 6 pieces of sarsen, 8 of quartzite, 14 of foreign stone, and 2 flint flakes. There was a cremation at the side of the hole, diffused downwards from 19 in. to 30 in. below ground level.

The Aubrey holes opened last year have been filled in and the position of each is marked by a patch of white chalk on the surface corresponding with the size of the hole below.

The excavation about the Slaughter Stone was also filled in. We were not able to find traces of holes for the stones marked by Aubrey in his plan.

In August a small investigation of the South Barrow was made. A line was taken from the centre of Stonehenge to a peg on the rampart for a base line which ran contiguous to the Barrow ditch. The radius of the Barrow was found to be 26 ft., the centre being about 2 ft. from the cavity left by an earlier excavator. Three sections were opened side by side, each of 12 ft. by 6 ft. crossing the ditch and taking in a portion of the Barrow. The small ditch is shallow and of irregular depth, being 31 in. deep where we began on the north-east, becoming less at the end of the third section where it was 20 in. It reached the rampart here and one cannot say yet if it continued. I am waiting until I have worked along the rampart ditch so as to get a view of it to see if it is continued through the bank. The soil of the small ditch was dark earthy rubble above and chalk rubble below, with many fallen flints. In the dark rubble there was a piece of sarsen, the only object the ditch afforded. The Barrow soil is very shallow over the chalk rock, the curve of it from the ditch making it appear higher than it really is. The soil is of earthy chalk rubble with humus and turf over it, and the three combined do not exceed 14 in., except at an Aubrey hole, three of which are covered by the Barrow.

The objects found in the rubble and humus of the three sections were 12 sarsen chips, 7 of quartzite, 127 of foreign stone, 7 chipped flints, 5 rough flint cores, 1 animal bone fragment, 1 piece of Bronze Age pottery, 5 of Romano-British, 1 flint flake, and 2 scrapers. In section 2 there was a piece of the edge of a finely polished axe-head. At the time the Barrow was made the site of the Aubrey hole must have appeared as a shallow depression which became filled with the rubble of the Barrow. The Aubrey hole was excavated and found to be similar to the others and had the inner edge crushed down. The depth of it is 3 ft. with an equal diameter of 2 ft. 5 in. In the rubble covering the top were 1 piece of sarsen, 3 of quartzite, and 11 of foreign stone. Lower down were the remains of a cremation 9 in. above the bottom. At the top where the edge was crushed was a small depression containing a few cremated bones. The excavation gives the impression that this site was one of a hut rather than a barrow.



STONE NO. 29, SHOWING PACKING-BLOCKS IN POSITION



FIG. 1. Section through Ditch, looking East

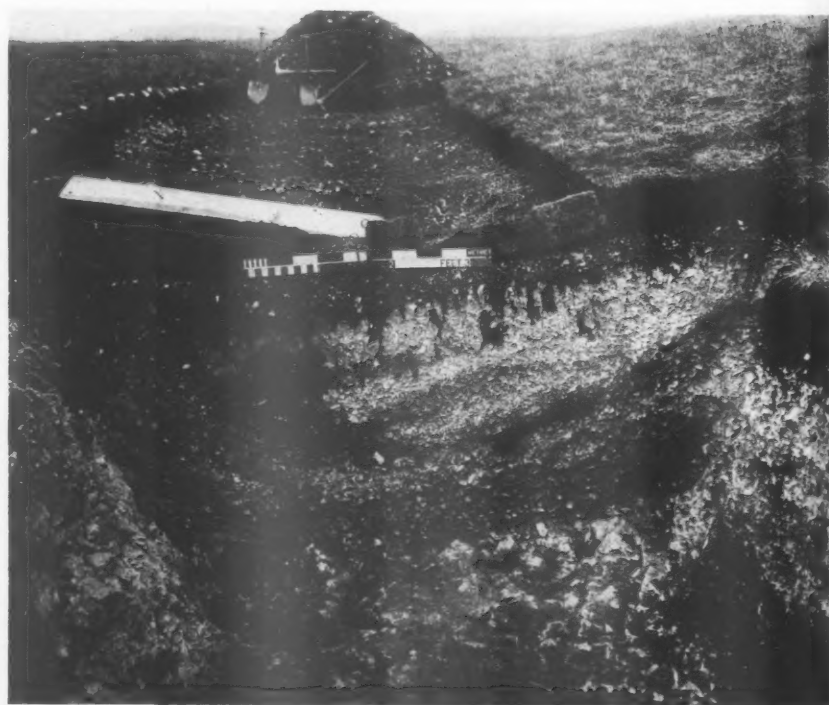


FIG. 2. Section through Ditch, looking West

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I have also to mention two excavations of the Rampart Ditch. The first (pl. VIII, fig. 1) was made last autumn and is a continuation westward of the one reported last year and of the same dimensions as that one, viz. 2 ft. by 10 ft. This was worked in downward layers. The top layer was in humus followed by earthy chalk rubble to a depth of 14 in. to 20 in., and was deeper near the counterscarp side. In it were 15 pieces of sarsen, 9 of quartzite, 57 of foreign stone, 24 small fragments of Bronze Age pottery, 6 of Romano-British, 1 piece of deer-horn, and several bone fragments. This layer ended upon a very compact bed of yellowish silt with a few flints in it. Objects of the sort found in the previous layer were completely absent. At 35 in. below ground-level there was a cremation. The bones in it were not numerous. They were very white and had been deposited in a roughly made recess in the soil. The next layer was in loose chalky rubble which continued to the bottom. A collection of wood ashes mixed with chalk occurred but was without burnt bones.

Nine fragments of animal bone and a stag-horn tine were also found. The bottom presented a fairly level line, being about 53 in. to 54 in. below ground-level.

The rise of the chalk on the escarp side was regular, but that on the counterscarp not so. From it a projection of solid chalk protruded; beyond it to the west the ditch widened again.

The second excavation (pl. VIII, fig. 2) was a continuation of the last. It was 26 ft. long by 9 ft. wide. After removing the top layer of humus and earthy chalk rubble I excavated it in a different manner from the last, as the curved layers are not suitable for vertical excavation. Vertical layers were removed from top to bottom, each layer being a foot thick, so that in advancing, a section of the ditch was always presented to view. If a cremation was come upon, the state of the strata would show if it had been placed there at the time or after the silting.

The excavation differed in appearance from the preceding ones. The centre line of the bottom varied from 52 in. to 63 in. below ground-level. The side of the escarp was fairly regular except at the extreme end where it penetrated a foot into the side, making the bottom of the ditch wider. The counterscarp was more irregular than in the last excavation, and had a similar bulging projection followed by a recess like the last. The projections extend about 3 ft. The recesses between are curved in the bank, and the floor of the ditch in front of them is level and smooth, giving the idea that the recesses might have been used as habitations opening into one another through the narrow part caused by the projection. Three feet in front of the projection

last found there is a hole in the chalk at the bottom, 20 in. deep and from 22 in. to 27 in. wide. The end of the hole is more pointed than bowl-shaped and the chalk wall of the escarp descends into it. There was nothing in it beyond loose white chalk. A great many roughly chipped flints were met with, mostly at the centre line on the bottom, but were distributed everywhere more or less upon the bottom; also patches of flint chips and fine flint *débris*, some being embedded in a thin layer of mud as if trodden in when the ditch was wet. A few flint cores were found, but only one definite flint implement, which was a borer.

The upper layer of humus and chalk rubble was about 2 ft. thick and contained objects of a similar character and period to those of the last excavation, their presence terminating abruptly where the rubble layer met the marly silt below it. I shall not enumerate them all, but amongst them was a stag's horn tine, an oyster shell, and a small metal fragment of two thin plates of bronze riveted together, probably Romano-British. There were three sarsen mauls. One was a fine one of about 30 lb., the next was smaller and rougher, and the third quite a small one. The large one had sunk through the rubble and was embedded slightly in the silt. The silted marl did not produce anything and objects were not found until near and on the bottom, where they consisted of chipped flints, 6 broken stag's horn picks, 3 pieces of antlers, apparently cut off when making picks, and 10 smaller fragments of horn, 37 pieces of animal bone, including part of the jawbone of a pig, and two leg-bones of the same. A large fragment of the horn core of a large bovine animal, having the appearance of a bison, was found about 15 in. above the bottom, and close to it a roughly rounded piece of chalk showing signs of cutting. There was no sign of any fire having been made on the ditch floor, and in all of the three excavations there was no sign of pottery after the top layer joined the silt.

The excavations so far appear to indicate two distinct periods and that the ditch and rampart were made at a time considerably anterior to Stonehenge, for the silting would have taken long to accumulate. When the ditch began to be neglected the lower silting would take place quickly by reason of frost attacking the chalk sides, as can be seen by the fallen white chalk over the ditch floor. This would go on until the fallen chalk had covered the chalk rock of the sides and so stopped further frosting. Silting would then become slower and the pace would be very slow at last, when only a little was deposited by rain flowing down the rampart. When Stonehenge was built the movement of the numerous big stones and of many people, and the general disturbed

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state of the ground, brought the earthy chalk rubble layer over the silt. Objects of that period became mixed with it and deposited as we have found them. Later, in a quieter time, humus and turf were formed, and objects of subsequent periods have passed through the surface as we see it at present.

DISCUSSION

Bishop BROWNE remarked that whereas the Pictish stones often bore engravings of various kinds, there was nothing of the sort to temper the austerity of Stonehenge, which was unapproached in interest by any monument in the island. He recalled the report made to King Alfred about the Esthonians, who enacted that every one must be cremated, and provided heavy penalties for leaving the smallest piece of bone unconsumed. Such was evidently not the case at Stonehenge. The builders of that monument belonged to a race not hitherto traced: they were not of Mediterranean origin, and must be identified among later peoples.

Rev. G. H. ENGLEHEART was struck with the painstaking accuracy displayed in the present as in the preceding report, and commended Colonel Hawley's caution in drawing conclusions, which contrasted favourably with two articles recently published in a daily newspaper, and only surpassed by the leading article suggested by them. Perhaps further misapprehension might be avoided by a preliminary account of the year's work at Stonehenge being drawn up by the competent authority and communicated to the press. The ditch had been described as earlier than the monument: were the ditch and rampart made before even the outer ring of blue stones was erected?

Mr. REGINALD SMITH pointed out that if nothing of the megalithic period (the main date of Stonehenge) was found on or near the bottom of the ditch, it was clear that the rampart and ditch preceded even the ring of Prescelly stones presumably erected in the Aubrey holes. Hence the first construction on the site resembled the enclosure of a disc-shaped barrow. Flint implements and flakes had been mentioned in association with Bronze Age pottery: were all the flints therefore of the Bronze Age, or were some of the sherds neolithic? Oyster shells had also been noticed, the occurrence of which low in the ditches of certain earthworks of the South Downs had recently been taken as proof of Roman date. Colonel Hawley was evidently prepared to make a special study of the ditch round the barrow in order to decide whether the barrow was earlier or later than the rampart of Stonehenge.

Mr. DALE said there was nothing but the Bronze Age pottery to disturb the conclusion reached in 1901 that Stonehenge was erected 3,800 years ago. It was important to ascertain whether the pottery was contemporary with the monument or had worked down from the

surface. He hoped the Society would publish a reproduction of Aubrey's map of the missing stones.

Mr. BUSHE-FOX had visited Stonehenge several times during the year and had been much impressed with Colonel Hawley's perseverance and absorption in the work. Few excavators would be ready to live in all weathers isolated in a hut on Salisbury Plain. He was present when one of the lintels was raised and was interested to see how accurately the mortise and tenon fitted. To obtain such precision the stones must have been finished in position; and how the necessary mechanism was provided constituted one of the many problems of Stonehenge. If there had been interconnected dwellings in the ditch, a considerable deposit of refuse might have been expected. Was the filling merely the result of silting, or had earth been purposely thrown into the ditch?

Mr. TAPP was primarily interested in the geological side of the problem, and had been able to secure a report on the foreign stones from Dr. Thomas. Many museums had been visited, and a parallel investigation of the stones at Carnac in Brittany was in contemplation. The removal of such stones from Pembrokeshire presented no great difficulty, as they would have come most of the way by water, via Bradford-on-Avon.

Rear-Admiral SOMERVILLE was interested in the orientation of Stonehenge, but did not go so far as the late Sir Norman Lockyer. To make accurate calculations with such stones was impossible, and the older stones there were not even faced. In addition to mauls and flint hammers the masons of Stonehenge must have had something in the nature of a chisel. A great trench was the first monument on the site, and very few stone circles surrounded with a ditch were known: there was one in the south of Ireland. It would be of interest to note the bearings of the gaps noticed in the side of the ditch, as the general orientation implied a knowledge of astronomy and might reveal the nationality of the builders.

Colonel HAWLEY replied that the antler was almost the only object found at the bottom of the ditch, the horn-core being 14 in. or 15 in. higher. There was a rounded piece of chalk showing signs of cutting, and the borer was the only flint implement. The cutting-edge of a finely-polished stone axe came from the top of the barrow.

The CHAIRMAN (Mr. C. L. Kingsford, V.-P.) assured Colonel Hawley that his zeal and self-sacrifice were highly appreciated by the Society, and thought that a report in the Society's *Journal* would be preferable to a preliminary notice in the daily press.

Notes

Death of Mr. Benjamin Harrison.—The death of Benjamin Harrison on 30th September last removed another of our flint-collectors, whose name and worth must find a place in any text-book of prehistory. The village of Ightham, where he attained the ripe age of eighty-four years, has a palaeolithic site of its own at Oldbury, and lies at the foot of the North Downs, on the northern slopes of which most of the Kentish eoliths were found. Specimens have been dispersed far and wide, but it is doubtful whether opinions are less divided to-day as to their date and origin than in the days of Prestwich, Evans, and Lubbock; and it is curious that the question has remained open so long, for throughout the struggle Harrison had not a few stalwart supporters. The three eoliths that rest on his coffin are symbolic, not of the burial of all controversy on the subject, but of the lasting association of his name with the search for Tertiary man in Britain.

The Palaeolithic Age in Scandinavia.—Till recently Scandinavia, like Ireland, was denied a palaeolithic past; and a change of opinion on one side may find an echo on the other. Two honorary Fellows of the Society have been concerned with the possibility of man's presence in Scandinavia in or before the last cold period, and Professor Montelius recently expressed his views in the *Journal* (April 1921). Dr. Shetelig, of Bergen, has speculated on the first inhabitants of Norway in *Naturen* (July-Aug. 1921, p. 193), and finds no valid argument against a palaeolithic culture, which would take the occupation back beyond the epipalaeolithic stage of Maglemose. So far, it must be confessed, no such early relics have been recognized, but (as again in Ireland) the mammoth has been found, and its human contemporaries may yet be traced. Conditions in a mountainous country may be less favourable; but if the latest evidence is accepted it may be pointed out, by way of encouragement, that our innumerable drift implements have all survived the stupendous glaciation that left behind the chalky boulder-clay of our eastern counties. In a country where flint was obtainable a glaciation may shift, but does not necessarily destroy, the indubitable relics of palaeolithic man.

Date of the Neolithic Period.—There is always a temptation to give a date in years for any prehistoric event, and such attempts at precision are laudable in so far as they challenge criticism. Attention may be drawn to Mr. C. E. P. Brooks's scheme published in *Quart. Journ. Royal Meteorological Society*, July 1921, 173-194 (abridged in *Man*, 1921, no. 59, and *Nature*, 15th Sept. 1921, p. 91), which distinguishes four successive climates in the Neolithic Period, and dates the peat-bogs between 1800 B.C. and 300 A.D. It is calculated that the elevation of land that turned the Baltic into the Ancylus lake took place about 6000 B.C., and about 2,000 years later a subsidence of part of Scandinavia produced the Litorina sea. These two events are the pivots of Scandinavian prehistoric chronology, and a general agreement on their date in years would mean advance in several directions.

Prehistoric trephining.—A further paper on prehistoric trephining is contributed by Dr. Wilson Parry, F.S.A., to the *Proceedings of the Royal Society of Medicine*, xiv, no. 10. After investigating seven alleged cases in Britain, he concludes that the best example of trephination during life is the Thames skull now in London Museum, there being some doubt as to the age and origin of the Edinburgh specimen. One from Eastry shows congenital deficiency; those from Northampton and the river Wear were operated on after death; and the Mountstuart and Bisley specimens show signs of disease. It is evident that the practice was not so common in Britain as abroad, where amulets cut from the human skull are fairly numerous (Brit. Mus. *Iron Age Guide*, fig. 52).

Note on the construction of hill-top camps.—Mr. O. G. S. Crawford, F.S.A., writes as follows: On the occasion of a recent visit to Uffington Castle, on the White Horse Hill, Berks., I noticed a small rounded boulder of sarsen-stone exposed in the outer face of the rampart about midway between the top of the rampart and the bottom of the ditch. Probing with a walking-stick revealed others on each side. Sarsens could not occur naturally in such a position, and must have been placed there for a definite purpose. From the analogy of the hill-top camp of Pen Dinas (between Barmouth and Harlech, Merionethshire), which I excavated in 1919,¹ I am inclined to think that the sarsens at Uffington are the remains of an outer retaining wall built to support a central core of chalk rubble. It is probable that excavation would reveal remains of a similar retaining wall on the inner side of the rampart. At Pen Dinas the lower parts of the outer and inner walls were revealed by excavation and found to be in a very perfect state of preservation, the stones being of great size and (though not shaped) carefully fitted into place. The natural weathering of the rampart made it possible to trace the 'outcrop' of these walls for some distance; and a recent inspection of another hill-top camp (Twyn y Gaer, on Mynydd Illtyd, west of Brecon) reveals the same features. The question is of some interest, for the discovery at Uffington suggests that similar methods of construction were employed in Wessex; and that the ramparts of all such earthworks may originally have been contained within retaining walls of sarsen or flint. This would account for the flat and stony top of so many of them. Timber may also have entered largely into their construction, as in the case of the contemporary fortresses in France. It is to be hoped that future excavators will bear this point in mind when cutting sections through the ramparts of camps.

The following remark in Thurnam's *Crania Britannica* (vol. ii, 1865, 'White Horse Hill, Berks.') is of interest: 'Mr. Martin Atkins's discovery of the remains of strong palisading in the chalk vallum of Uffington Castle has not yet been published.' As Mr. Atkins died in 1859, his discovery has probably remained unpublished.

The discovery of a Roman coffin at Lower Slaughter.—This find, reported in the *Antiquaries Journal*, i, 340, is closely parallel to one

¹ See *Arch. Camb.*, 6th series, vol. 20

made near Burford in 1814. There, too, a large stone coffin (orientated north and south) was discovered, according to one account 6 in., to another 3 ft., below the surface of the ground. In addition to 'a perfect male skeleton of middle stature, having all the teeth entire', 'a number of short nails with conical heads were found completely oxidated and matted together in pieces of hide'. Such conjectures as that 'from the circumstance of the nails being thickly placed and clenched through several layers of the hide, it is highly probable a shield was formed',¹ or that they formed part of an object 'worn as a defence, not unlike a Roman Lorica',² and the connexion of the discovery with the battle of Burford in 752, become superfluous when the leather and nails can be resolved into humble foot-gear like that found in the coffin at Lower Slaughter.

Discoveries at Scarborough.—Mr. Gerald Simpson, in the course of his excavations on the site of the Roman fort on Castle Hill, has discovered the north wall of the medieval chapel in the castle, situated on the edge of the cliff. This chapel is referred to in Richard I's grant of the parish church to the Cistercians. South of the chapel are remains of post-Dissolution buildings. Underlying the site, and at no great depth, portions of Roman masonry are to be seen, showing that the walls of the fort with a square building in the middle, following the normal plan, are in existence. It is hoped to complete the clearing of the site next season. Amongst the objects so far discovered are pieces of stained glass, glazed tiles, remains of tobacco-pipes, a few coins, and a considerable quantity of medieval pottery.

Foundations revealed by the drought.—Excavators are in the habit of watching differences of growth in cornfields and pasture in the hope of tracing foundations or ancient disturbances of the soil; and the phenomenal weather of last summer brought a good deal to light. The walls of a Roman building have been mapped in a cornfield outside the walls of Richborough; and an ancient causeway, the line of which was revealed by the drought, has been excavated by Alderman J. Morland between Street and Glastonbury. Mr. Stephen Manser reports that the foundations of a Roman villa have been found in the same way near Hull Place, Sholden, near Deal; and our Fellow Mr. Heneage Cocks hopes to examine the foundations of a Roman corridor-house recognized in a field near the mill adjoining Hambleden Lock.

Discoveries at Brighton.—Last June, during excavations connected with widening the Ditchling road, north of Hollingbury Camp, Brighton, a crouched skeleton was discovered, lying on the left side and facing south-east, in an oval grave only 22 in. deep. At the feet of the skeleton was a perfect beaker ornamented with horizontal and oblique lines of punch-marks; under the skull was a 'barbed flint arrow-head; and in front of the face a quantity of snail-shells. The greater portion of the shells had become crushed, but the following

¹ *The Gentleman's Magazine Library; Archaeology*, ii, 187.

² W. J. Monk, *History of Burford* (1891), p. 9.

species have been identified: *Clausilia bidentata*, Ström.; *Helix nemoralis*, Linné; *Hygromia rufescens*, Pennant; *Pomatias elegans*, Müll.; *Pyramidula rotundata*, Müll.; *Vitrea cellaria*, Müll. The above finds are in the Brighton Museum.

Find of coins near St. John's Hospital, co. Limerick.—Mr. E. C. R. Armstrong, F.S.A., Local Secretary for Ireland, has communicated the following:

On 2nd August 1921, workmen employed by the Limerick County Council found, when excavating near St. John's Hospital, some coins. These, numbering twenty-two, were taken charge of by Mr. J. J. Peacocke, city surveyor; by him they were forwarded for examination to the National Museum.

The following is a list of the coins: one Irish groat of Henry VIII, second coinage; two English groats of Mary; one Irish shilling of Philip and Mary dated 1555 (base); eleven Irish groats of Philip and Mary, one dated 1555, two 1556, three 1557, three 1558, and two unreadable (base); two English groats of Philip and Mary, first issue; three Irish groats of Elizabeth, first issue (base); two English sixpences of Elizabeth, one dated 1573, the other unreadable.

The coins were in poor condition. None being required for the Irish National Collection, they were returned to Mr. Peacocke, who has forwarded them to the Limerick Museum.

Congress of the International Institute of Anthropology at Liège.—Our Hon. Fellow M. Rutot has been good enough to send the following summary (translated) of the programme carried out at the Liège conference: On 25th July 1921 the second session of the International Institute of Anthropology opened at Liège, the meetings being held at the University and lasting till 1st August. Prince Roland Bonaparte presided at the inaugural meeting and was supported by Dr. Capitan, the secretary-general, Dr. Papillault, secretary, and Count Bégouen, administrative secretary. Professor Cartailhac, vice-president, the Abbé Breuil, and many distinguished representatives of various countries attended the meeting. The sections started work the next day, and M. Cartailhac gave an evening lecture with lantern-slides on Palaeolithic Art. The following days were devoted to sectional meetings, and to visiting museums and University departments. From 29th July to 1st August excursions were organized to various prehistoric sites, and to scientific institutions at Liège and Brussels.

The Congress was divided into eight sections: Anthropology, Pre-history, Ethnography, Criminology, Eugenics, Proto-history, Linguistics, and Sociology; and interesting papers were read in each section. Pre-history attracted a large number, but few questions were studied or discussed. A communication of special interest was made by M. Reygasse on a series of palaeolithic industries collected in the south of the province of Constantine, Algeria. On several spots M. Reygasse has discovered important occupation-levels corresponding to the cultures of Chelles, St. Acheul, Le Moustier, and Aurignac; and a fine series of specimens has been generously presented to the Royal Museum of Natural History at Brussels.

The excursions were well attended. On 29th July the Prehistorians visited the north of Liège province, where enormous flint mines have been discovered with chipping floors, ranging from the earliest neolithic (period of Le Flénu) to the age of polished stone (Spiennes period). A large number of specimens was presented to the visitors. On 30th July a cave of Mas d'Azil age was excavated at Martinrève; the next day some pit-dwellings of the Omal period were opened in Hesbaye; and on 1st August there was an excursion to Ste-Gertrude, a deposit of the Spiennes period.

Excavations in the Cambridgeshire dykes.—Mr. C. F. Fox, Local Secretary for Cambridgeshire, reports that during the present season a series of excavations, designed to include eventually all the Cambridgeshire dykes, has been begun by the Cambridgeshire Antiquarian Society. A preliminary investigation was carried out to determine whether or no the ramp which carries that portion of the Roman road from Haverhill to Cambridge known as Worstead or Wool Street was the vallum of a pre-Roman dyke. That this was the case had been suggested by McKenny Hughes in 1903¹ and the suggestion was adopted by Mr. Allcroft in his *Earthwork of England* (507-9). In order to settle the point it was only necessary to cut a trench down to the undisturbed chalk rock at a point where the ramp was well marked; the presence or absence of a filled-in ditch either to the north or south thereof could thus be readily demonstrated. This was done at a convenient point on the Gog Magog hills, and it was seen that there never had been any ditch; moreover, the construction of the ramp—a floor of puddled chalk, then turf, then a layer of chalk rubble, upon which was a gravel capping—showed that it was an example of Roman civil engineering. Work was then begun on the Balsham-Wilbraham sector of the Fleam Dyke. This dyke was selected because nothing bearing on its date had yet been found in its vallum or fosse, and because its position (perhaps the most favourable for defence on the chalk belt) and sinuous line suggested an antiquity second to none in the system of which it is the second largest member.

The investigation was confined to that portion of the dyke which lies between the disused railway cutting and Dungate Farm,² a distance of 2,500 yards. Here it presents to-day uniform characters, the ditch being 10-11 ft. deep and the scarp measuring 40-50 ft. on the slope. A section across the vallum showed an original 'core'—a bank some 7 ft. high—increased to the present dimensions by two additions. Intervals of time are shown by the presence of silt (rainwash) between these successive reconstructions. Sections across the fosse at several points revealed a trench with a flat floor some 4-6 ft. below the silt, and showed the counterscarp to have been steeper than the scarp. A secondary trench or shelf near the foot of the scarp, sometimes flat, sometimes V-shaped, is a constant feature, and is deemed to represent, with the 'core' of the vallum mentioned above, the first phase of the defensive work. Steps or footholds in the chalk face of the scarp

¹ *Camb. Antiq. Soc. Proc.*, vol. x, p. 458.

² See the 1 in. Ordnance Survey Map Sheet 205.

near the original ground-level are thought to be connected with the means adopted for raising the material from ditch to bank. These sections revealed on the whole a striking uniformity in the profile of the fosse. If the existing dyke be the result of successive reconstructions, these were, one may conclude, on each occasion carried out along the whole length of the sector under investigation.

The original crossing-point of the Icknield Way, whether in the form of an unmetalled track or of a Roman road, was not determined. The fosse was found to be continuous up to the metalling of the present London-Newmarket road on either side; and rubble filling was found on the line of the fosse at several other points in the neighbourhood thought to be possible crossing-places. The evidence of a Saxon charter (974 A.D.) suggests that the Way, and a Roman east-and-west road the existence of which had not hitherto been suspected, crossed the dyke at the western end of Wrattling parish, close to Mutlow Hill. A preliminary excavation provided some confirmation of this, but adequate examination of the site is postponed till next year.

The presence of Romano-British potsherds, discovered at two points in and under the successive additions to the original 'core' of the rampart, points to these reconstructions having been carried out at some time subsequent to the Claudian conquest. A section through the partially levelled 'core' near Mutlow Hill also revealed Roman remains in the subsoil, but the evidence was not held to be sufficient to warrant the conclusion that the whole work was of a date after A.D. 43. The fact that no single fragment of deer-horn, and nothing to which a date prior to the Roman period can safely be given, has been found in the course of the excavations, either in the fosse sections or in the vallum, is, however, in favour of this conclusion.

It is hoped that next season's work may enable a definite pronouncement on the dates of the earthwork to be made. A full report of the excavations will appear in the next *Proceedings* of the Cambridge Antiquarian Society.

Early Iron Age cemetery at Foxton, Cambs.—Mr. C. F. Fox, Local Secretary for Cambridgeshire, announces the discovery, in April of last year, in a field 200 yds. north-west of the railway station at Foxton, Cambridgeshire, of two inhumation burials, associated in one case with an iron-socketed spearhead and a wheel-made food vessel, and in the other apparently with a hand-made beaker of rude character. The discovery may prove to be of importance, for the remains suggest a cemetery of La Tène III-IV date. The site will, it is hoped, be investigated by the Cambridge Antiquarian Society.

The Excavations at Fostât.—Mr. Somers Clarke, F.S.A., sends the following note on his paper published in *Proc. Soc. Ant.* xxxii, p. 106-7: 'The Director of the Tanzim has, I am happy to say, realized what a value is to be attached to many things that come under his hands. He has taken much care to study the subject, and has with intelligent interest taken up the conservative point of view.'

'What I have said in regard to the Ministry of Public Works and its powers still holds good. They have been ill used and matters are still at the mercy of any ignorant official; but the Director of the Tanzim is now doing his best.'

Discoveries near Bewcastle.—The local secretaries for Cumberland send the following report:

A silver ring-brooch and a bead necklace, lying together about twelve inches deep in peat on Bailey Hope Common, five miles north-west of Bewcastle church, were found on 1st July 1921 by Mr. James Beaty of Graham's Onset. The objects have been given to the Carlisle Museum and were described at the September meeting of the Cumberland and Westmorland Antiquarian Society by Mr. L. E. Hope, F.L.S., curator of the museum. The brooch is $1\frac{5}{8}$ in. in diameter, with a pin about $1\frac{1}{4}$ in. long, working in a slot in the ring, which is flattened and about $\frac{3}{8}$ in. wide. The front of the brooch is engraved in Late Lombardic lettering \times IESVSNAZAREN, the Z reversed and N in Roman uncials. The necklace has lost its cord, but the beads were lying together and form a complete and symmetrical set of sixty-three, of which fifty-five are of amber, six of jet, and two are cubes of rock-crystal with the edges splayed. Mr. Reginald A. Smith, F.S.A., to whom the find was submitted, dates it fourteenth century.

The *Congrès d'Histoire de l'Art*, which met in Paris from 26th September to 5th October, proved successful to a degree which reflects the greatest credit on the French organizing committee. The meetings took place at the Sorbonne, where six lecture-rooms were as a rule occupied simultaneously by separate sections; and the great quadrangle outside served as a welcome meeting-place for museum officials and archaeologists of five-and-twenty different nations (including Austria, Bulgaria, and Turkey), after the many years of separation or scanty intercourse that the war had involved. The sections, one of which was presided over by Sir Hercules Read, P.S.A., were devoted to Teaching and Museum Management, Western Art (divided into three subsections), Byzantine and Far Eastern Art, and Music.

It would obviously be impossible to mention here even the most striking of the many papers read; a summary of them is being prepared for members, and a certain number will be printed in full in a subsequent publication. From an archaeological point of view some of the contributions made by the Scandinavian and Spanish members were particularly remarkable.

Apart from the meetings and the various official receptions and visits to museums, excursions were organized to Chantilly, Chartres, Rheims, and Fontainebleau, and several private collections in Paris were thrown open to members. By a notable favour Prince Czartoryski allowed a visit to the Hôtel Lambert on the Ile St. Louis, an example of mid-seventeenth-century architecture which is as a rule completely inaccessible to strangers. There was a concert, mainly of ancient music, in the doubly historic Galerie des Glaces at Versailles, and a special performance at the Opera. Altogether the French committee, over which M. André Michel presided, richly deserved the gratitude

which was expressed to them by so many of the national representatives at the close of the Congress.

The Devil's Den, Manton, Wilts.—The Rev. E. Goddard, Local Secretary for Wiltshire, sends the following report:

Owing partly to the continual ploughing away and levelling of the ground immediately surrounding it, this well-known dolmen, standing some half a mile off the Bath Road, between Avebury and Marlborough, showed signs of probable collapse. The Wiltshire Archaeological Society having sought the advice of the Chief Inspector of Ancient Monuments in the matter, an expert from the Office of Works met representatives of the Society and a local contractor on the spot, and gave detailed instructions for the concreting of the base of the main supporting stone which threatened to give way. This involved the shoring up of the structure whilst the necessary excavations were made, and the work now completed has proved more expensive than had been expected. To pay for this (£54) the Wiltshire Society is now raising a special fund. The excavations were carefully watched and examined on behalf of the Society by Mr. A. D. Passmore, but nothing whatever was found. The ground has been long under the plough, but indications of the long barrow of which the dolmen originally formed a part are still to be seen.

Discovery of a leaden font at Lower Halstow, Kent.—An interesting discovery has been made at Lower Halstow Church, Kent. The font stands against the west side of one of the piers of the nave's north arcade, probably not its original position, since it is nowhere near the principal—the south—door of the building. Until February 1921 the font had the appearance of being a plain square basin of stone, rudely repaired, and having a lead lining, the basin supported on five shafts, i. e. one central and one under each angle. In the month above named, owing, it is believed, to concussion caused by the firing-practice of extra heavy guns at Shoeburyness or elsewhere at no great distance from Lower Halstow, portions of the square bowl became dislodged and fell. This led to the discovery that the supposed stonework was nothing else than a roughly built up conglomeration of brick rubble and plaster, while the lead lining was in fact a cylindrical lead font encased in the brickwork. The relief ornament of the font (of late twelfth-century character, but possibly executed from the old moulds as late as the middle of the thirteenth century) comprises single figures standing beneath a round-headed arcade supported on spiral columns, with a border not unlike a cable-mould running round the foot of the bowl. Six arches, centring at about 7 in., are at present visible (for the font has not yet been completely uncovered), but it is reckoned that there should be about ten arches in all. The figures are of two variants repeated, viz. an angel alternating with a royal personage, apparently male, with crowned head and in the right hand a sceptre. The rim of the font curves outward slightly, forming an overhanging lip all round the top of the cylinder. The circumference of the bowl is approximately 60 in., its diameter 21 in., and its height 12½ in.

A discovery of Roman pottery at St. Stephen's, St. Albans, is reported by Mr. G. E. Bullen, local secretary. Several important interments of the Romano-British period have come to light in that portion of St. Stephen's parish which lies just without the confines of Verulamium; and a full account, with illustrations, is to be found in the *V. C. H. Herts.* iv, 125. The extent of the cemetery near King Harry lane has never been fully investigated, but the gardens of Halsmede, the property of Mr. F. N. Reckett, and the adjacent ground of Watling House, in the tenancy of Sir Edgar Wigram, have yielded from time to time a number of cinerary urns and other pottery sufficient to indicate that on either side of the road burials were in many instances only a few yards apart. Sir Edgar Wigram has recently given to the Hertfordshire County Museum nine more or less perfect vessels, all of which were discovered in scattered positions in the garden of Watling House; and as these finds were associated with innumerable fragments, the vessels are probably but a small proportion of those originally buried on the site. The only potters' marks are: **OF VIRT**I (Virtus of La Graufesenque and Montans, on Drag. 18) and **OF CELADI** on a variety of Drag. 18.

The excavations at Mycenae.—The recently issued report of the British School at Athens for the session 1920-1 contains a summary of the excavations undertaken at Mycenae by the British School under the supervision of the Director, Mr. A. J. B. Wace. The work undertaken consisted of supplementary excavations on the Acropolis, and a search for tombs. On the Acropolis the Ramp House, south of the grave circle, appears to have been of the megaron type and to date 1400-1100 B.C., the third Late Helladic period. Below it were found walls of the first and second Late Helladic periods, and among these were fragments of frescoes. Lower were a few remains of the Middle Helladic period, and empty graves cut in the soft rock, tending to confirm the view that the grave circle is only part of a cemetery occupying the side of the hill. On the summit of the Acropolis the palace site was cleared. This enabled the plan of the later palace to be ascertained and shows it to have been a much larger building than the earlier palace, at least two stories in height, with a large court, two entrances, a large columnar hall, storerooms, and staircases. The plan of the southern entrance can now be traced and in many ways recalls that at Knossos. A careful examination of the Lion Gate disclosed the fact that the relief of the lions was cut by saw and drill, and that the lions' heads were possibly of steatite and not of metal as usually supposed. The gateway itself was apparently roofed over inside.

The search for tombs was most successful. To the south of the Treasury of Atreus three more tombs, of the ordinary chamber type, were found. In the smallest were found a huddled skeleton, terracotta statuettes, and a seal-stone showing a man vaulting over a bull, with a sign resembling characters of the Cretan script. The second tomb contained four or five skeletons and in the passage way were the remains of at least sixteen more, with numerous fragments of vases.

On the Kalkani hill another cemetery, going back to the beginning of the Late Helladic period, was excavated. The tombs have rough-hewn passages leading to a rock-shelter rather than a well-cut chamber tomb, and among the finds were vases, ornaments, and seal-stones, two of which, representing the goddess, were of peculiar interest. It is hoped to complete the excavation of this cemetery during the forthcoming session.

Excavations in South Wales.—Dr. Mortimer Wheeler, local secretary for South Wales, reports as follows: A long cairn close to Pen-y-Wyrlad, Brecknockshire, has been explored by the Woolhope Club. It included at the east end a megalithic cist, without entrance passage, and at the west end a supplementary chamber containing charcoal. The principal chamber yielded remains of twelve human skeletons, animal bones, two potsherds, and some flakes. A few feet west of the chamber, and some two feet below the surface, were found a number of blue glass beads and small tubes of vitreous paste. In the débris was a coin of Crispus.

Between Llangynwyd and Port Talbot, Glamorgan, barrows and cairns have been explored by the Margam Trustees and the National Museum of Wales. In all cases the mounds had been damaged, but one cist burial containing slightly charred bones was found intact. Some of the mounds had been built of irregularly cut turves and contained a few flint flakes.

A cave on the Lesser Garth, near Radyr, Cardiff, has from time to time yielded human remains, flints, fragments of bronze (two gold-plated), and pottery, some of it grey Romano-British ware. Two clay hearths, recently excavated, and most of the finds can be assigned to the Romano-British period, but a cylindrical pot, 6 in. high, with a series of raised knobs below the rim is of a type considered to have been introduced into southern Britain about 900–650 B.C. by new tribes whose pottery has analogies both east of the Rhine and north of the Pyrenees. This is the first recorded occurrence of the type in Wales.

Near Blaenrhondda, Glamorgan, hut-circles and cattle enclosures have been planned and partly excavated by the Rhondda Naturalists Society and the National Museum of Wales. The finds were few and inconclusive, consisting of leather, iron, and a little iron slag. The settlement may well have been the summer station of a small pastoral community.

At Newport, Pembrokeshire, two medieval pottery kilns and fragments of fourteenth and fifteenth century pottery have been discovered. The kilns were of stone and slate, circular in plan, with a diameter of 6 ft. The platform was raised on a solid and slightly coned drum, with a roughly arched stoke-hole. The pottery includes sherds of plain and green-glazed ware, some with indented thumb ornament, green-glazed ridge tiles, and fragments of partially glazed slate.

Roman inscription at Caerleon.—Dr. Mortimer Wheeler, local secretary for South Wales, reports the following fragmentary inscrip-

tion found in or near the Roman cemetery at Ultra Pontem, Caerleon. It is now in the Caerleon Museum:

SERC
DOM
PP · LEU . . .
D ↗
SINE · TRA . .
EX · ARC . . .

The monument was apparently that of a *primus pilus* of the 2nd Legion Augusta, possibly of the Sergian tribe, but the interpretation of the last three lines is far from certain. The D suggests the restoration of a corresponding M, but if so the position of this formula on the stone is most unusual. Professor Stuart Jones suggests a second D, i.e. *decreto decurionum*. The fifth line is at present unexplained. The sixth may be EX · ARCA · PVBL, 'from public funds'.

*The excavation of Segontium, Carnarvonshire.*¹—During the recent summer the Segontium Excavation Committee resumed work and turned to the examination of the interior of the Roman fort, under the direction of Dr. R. E. Mortimer Wheeler.

The ramparts were found to have consisted originally of an earthen bank which yielded first-century Samian. At a period not yet determined, apparently not earlier than the Antonine period, a stone wall was built in front of this bank, which was extended to meet it. At the north corner the bank was surmounted by a rectangular stone turret. The north-west gateway showed three main periods of construction and presented exceptional features. Of the first period, only the roadway, in association with first-century pottery, could be identified. In the same period, which was probably not later than the middle of the second century, the gate was rebuilt on a large scale with two roadways and flanking guard-room. Thereafter, little or no work seems to have been carried out here until c. A.D. 350, when the whole gateway was pulled down and replaced by an entirely new work. In the new work, one of the roadways was widened and the other was occupied by a guard-room. This guard-room, however, had an external gate, and was approached from the lower ground outside the porch by a flight of steps. Six coins, well stratified, found in the structure of this last work, combined to indicate the third quarter of the fourth century as the period of construction. Inside the fort parts of two buildings were uncovered and yielded numerous late fourth-century coins in their latest floors. The evidence at present available suggests three main periods of occupation of the fort: (1) c. A.D. 80 to 125; (2) A.D. 200 to 210; (3) A.D. 350 to 385.

The second interim Report upon the work will appear shortly in *Archaeologia Cambrensis*.

*Excavation of a barrow near Holywell, North Wales.*¹—A round barrow some 180 ft. in diameter on Ffridd y Garreg Wen, Gersedd, was opened during last spring and summer by students from Liver-

¹ Reported by Mr. Willoughby Gardner, F.S.A., local secretary for North Wales.

pool University under the direction of Mr. Howel Williams, B.A. It was thrown up over a step in the limestone rock. It contained a primary cremation resting upon earth beneath the step in a mound covered with a layer of stones. Above this a second layer of stones covered a secondary urn burial. Tertiary cremations had been made subsequently and covered by a third stone layer which was confined to the south-east side only of the tumulus. Relics were found with the primary and secondary cremations only; with the former about a dozen broken flints and a stone pendant; in the urn containing the secondary cremation, a bronze dagger and pin. A detailed account will appear in *Archaeologia Cambrensis*.

*Excavation of a mound at Rug Park, Merionethshire.*¹—A partial examination of this site was made in June last, by permission of Colonel Vaughan Wynn, under the superintendence of Mr. Willoughby Gardner, F.S.A., with the view of elucidating certain discoveries made there by the Hon. C. H. Wynn in 1875-9. It was found that the mound was primarily a burial mound of Bronze Age type. It covered a cremation enclosed in a stone kist, which was protected by a small cairn of stones piled over it, while around it, at a distance of 50 ft., was a stone circle. The circle was excavated half-way round and is apparently continuous. It was found to consist partly of large stones set upright in the ground and partly of stone walling. Over this original sepulchral mound a castle motte was proved to have been subsequently thrown up. The original floor of this castle was located by a layer of black earth near the top of the mound containing many broken animal bones and several interesting circular draughtsmen made of bone and ornamented with ring and dot pattern. The ditch of the motte was cut at one point and found to be V-shaped, 20 ft. wide and 8 ft. deep. Only a few broken bones were met with in the ditch at the point excavated. It is hoped to continue the exploration of the mound next summer.

*Excavation of ancient settlement at Rhos Tryfaen, Carnarvonshire.*¹—Considerable groups of hut circles approached by sunken ways and accompanied by evidences of terrace cultivation are being examined here by students from Liverpool University, under the direction of Mr. Howel Williams, B.A. The excavations so far made have revealed abundant evidence of native smelting operations in the form of iron ore and slag, also a bronze ornament with late Celtic decorations and two blue glass beads.

The work will be continued next spring.

*The excavation of the fortified village on Penmaenmawr, Carnarvonshire.*²—Work was resumed here by the Cambrian Archaeological Association under the direction of Mr. H. Harold Hughes, F.S.A., in September. The quarrying of the summit has advanced considerably into the fortified area, but the survey and excavation is well ahead of the inevitable destruction. The finds this season, though not numerous,

¹ Reported by Mr. Willoughby Gardner, F.S.A., local secretary for North Wales.

confirm the conclusion arrived at during the pre-war excavations, namely, that this site was inhabited during the period of the Roman occupation of the country. So far there is no indication either of an earlier or of a later occupation. A silver bracelet is one of the most important of the recent discoveries.

A detailed report will appear in *Archaeologia Cambrensis* as previously.

*The stone axe factory at Craig Lwyd, Penmaenmawr, Carnarvonshire.*¹—Some further excavation has been done by Mr. S. Hazzledine Warren, F.G.S., upon the site during the summer, confirming and amplifying the results previously reported.

*Recent archaeological work in Italy.*²—Dr. T. Ashby, F.S.A., contributes the following note :

During the year 1921 there are again no discoveries of exceptional interest to chronicle, though a good deal of work has been done. In Rome itself we have to notice that the demolition of the former German Embassy has rendered it possible to examine once more, and more completely and satisfactorily than before, the remains of the Temple of Jupiter on the Capitol. Three out of the four angles of the substructure were brought to light, and a considerable portion of the north front was also found. The remains are entirely constructed of small blocks of *capellaccio*, an ashy grey tufa which is used exclusively in the earliest buildings which have come down to us in Rome, and may therefore be assigned with fair certainty to the original temple of the time of the Tarquins. Hardly anything has indeed been found that can be assigned to any of the later reconstructions, though a few fragments of the columns of the temple of the time of Domitian were already known.³

On the Palatine excavations are in progress in the south-western portion of the house of Augustus,⁴ but no reports are as yet available.

During the restoration of S. Sabina on the Aventine a block of marble, probably an architrave, was found, bearing an inscription recording the restoration by Gordian III of the baths of Sura, which were also situated on the Aventine, facing the Palatine, though no traces of them now exist.⁵ Some interesting remains of sculpture have been found near Mentana, the ancient Nomentum, a district which in Roman days was studded with villas. They include a portrait head of a Greek philosopher—the misanthrope Demosthenes (the identification is Mrs. Strong's)—and a small bronze statuette of a boy with a whipping-top (Virgil, *Aeneid*, vii, 378).⁶

Work continues at Ostia, and we may note the uncovering there of part of the site of the Forum, though it appears to have been a good

¹ Reported by Mr. Willoughby Gardner, F.S.A., local secretary for North Wales.

² See *Antiquaries Journal*, i (1921), 61 : and *Times Literary Supplement*, Dec. 2 and 16, 1920 (pp. 794, 856). Cf. also *Antiquaries Journal*, i (1921), 362.

³ Paribeni in *Not. Scavi*, 1921, 38.

⁴ Richmond in *Journal of Roman Studies*, iv (1914), 197.

⁵ Paribeni in *Not. Scavi*, 1920, 141.

⁶ Id., *ibid.*, 1921, 55.

deal devastated. A colossal group of Commodus and Crispina, represented as Venus and Mars (the group appears originally to have represented Marcus Aurelius and the younger Faustina), is the most important piece of sculpture that has come to light.¹ Attention has also been devoted to the portion of the city adjoining the gate by which the Via Ostiensis entered it from Rome. The examination of the city walls is by no means complete, and many problems await solution. On the right of the road is a large block of buildings which originally consisted of a central nucleus surrounded on three sides (the fourth has not yet been excavated) by a portico with pillars of blocks of tufa. It was perhaps originally a storehouse, but has been extensively transformed in later times, a Mithraeum and a series of baths having been introduced.²

Some work has also been done at Porto, on the opposite bank of the Tiber, which takes its name from the ancient harbour of Trajan;³ while important excavations have been made at Lanuvium, where a temple with three cellae, resembling in plan that of Veii, has been found on the acropolis.

Surveying briefly other discoveries in Italy, we find that at Bologna the widening of the streets in the centre of the city has led to the discovery of the remains of the main street of the Roman city, which formed part of the line of the Via Aemilia; and on the west of the town a part of the embankment of the road leading up to the bridge over the Reno has been found.⁴ Remains of thermae have been discovered both at Siena and at Tuscania.⁵

At Formia, on the bay of Gaeta (the ancient Formiae, where Cicero had a villa), some fine sculptures have been found in an ancient villa—two Nereids riding on sea-monsters (Greek originals) and five unidentified portraits of the Julio-Claudian period; while at Venafrum two imperial statues have been found.

At Selinus in Sicily the continuation of the excavations in the temenos of Demeter Malophoros has produced a very large number of votive objects in terra-cotta, mostly statuettes, representing Demeter or Kore, of several different types.⁶

We may also notice various important discoveries at Syracuse and elsewhere, too numerous to be dealt with in detail here. The theatre, cemeteries, and fortifications of Syracuse itself have been further examined; at Megara Hyblaea an archaic Doric temple has been found, built over the defensive ditch of a village of the Neolithic period; and at Taormina a mosaic pavement representing the Cretan labyrinth has been found near the station.⁷

In Sardinia further excavations on the fortified plateau of S. Maria della Vittoria, near Serri, have led to the discovery of an open-air shrine of the Bronze Age, in front of which were three altars for the

¹ Moretti, *ibid.*, 1920, 41.

² Paribeni, *ibid.*, 1920, 156.

³ *Id.*, in *Rendiconti Lincei*, Ser. V, vol. xxx (1921), 78.

⁴ Ghirardini in *Not. Scavi*, 1921, 3.

⁵ Galli, *ibid.*, 1920, 111; Bendinelli, *ibid.*, 113.

⁶ Gabrici, *ibid.*, 1920, 67.

⁷ Orsi, *ibid.*, 1920, 303.

sacrifice of sheep, oxen, and swine respectively—the prototype of the *suovetaurilia*;¹ while an inscription from Fordungianus, the ancient Forum Traiani, seems to be a dedication to Augustus by the *Civitates Barbaricae* of the centre of the island.²

Archaeology in Palestine.—We are indebted to the Department of Overseas Trade for the following information :

The excavations at Ascalon have been brought to a close for the season. The great cloisters of Herod the Great have been identified and excavated, in addition to a basilica at the south end. In this portion of the area a local museum of sculptures and carvings has been organized.

Excavations have begun at Beisan and an interim report on the progress of excavations has been received from Dr. Fisher, on behalf of the University Museum, Philadelphia. The work promises important results and the excavations are being conducted in a satisfactory and gratifying manner in accordance with the best scientific method. The exploration of Tiberias and further excavations in the vicinity of the synagogical court with mosaic pavement and ambulatory has been uncovered.

At Caesarea the discovery of sculpture and pottery is announced. On this site measures are being taken for the conservation of such important ancient buildings as survive, and for the organization of a local museum.

At Atlith Castle, the fine groined chamber overlooking the sea has been cleared and steps taken to protect the foundations of the castle from further encroachment of the waves.

The exportation of antiquities is permitted only under special licence issued and signed by the Inspector of Antiquities.

Obituary Notices.

John Wickham Legg, F.S.A.—John Wickham Legg was born in 1843. He first gained distinction in medicine, and was well known both as a physician at St. Bartholomew's Hospital and as a writer of medical works. An illness which, though a misfortune for medicine, was fortunate for other studies, led him to abandon his professional career, to which his farewell was the Bradshaw Lecture at the Royal College of Physicians in 1883. He turned his attention to the subject, then greatly neglected in this country, of the history—and one might almost say the science—of Liturgy, and he became a scholar of world-wide reputation. He was the real founder and inspirer of the Henry Bradshaw Society for Editing Rare Liturgical Texts, which was formed in 1890; he was for many years the Chairman of its Executive

¹ Taramelli in *Rendiconti cit.*, 38.

² Id., in *Not. Scavi*, 1920, 347.

Council; and he contributed many of its most distinguished publications. His scientific training was invaluable to him in his new work, and his writings were marked by a critical accuracy which demolished many errors. He could be constructive as well as critical, and his volumes on *Church Ornaments and their Civil Antecedents*, on *English Church Life from 1660 to 1833*, and on other topics were a definite contribution to the reconstruction of forgotten phases of ecclesiastical history. He would not allow his friends to call him a learned man, and he expressed surprise that the University of Oxford should deem his work worthy of an honorary Doctorate of Letters, but he was by instinct, as well as by training and by achievement, a scholar and a man of learning. His knowledge was not only deep but wide, and far from being restricted to the limits of his published writings. He could have lectured on many periods of history and literature, for he read much and forgot little.

Dr. Legg was no learned recluse. In early life he had been tutor, and he was for a time physician, to the late Duke of Albany, and his experience of Court life was brought to bear on the interpretation of some aspects of history. He travelled much and he was a man of many friends. His home, presided over by the gracious lady whose death in 1908 was the great sorrow of his life, was happy and hospitable, and he gave unsparingly to his guests from the stores of his knowledge, his wit, and his reminiscence. Many of those who were privileged to know him in London or at Braemar have gone before him, but there are still not a few who treasure the recollection of some knowledge and much happiness which they owed to his kindness.

After Mrs. Legg's death, Dr. Legg made his home in Oxford, where his only son is a Fellow and Tutor of New College. He retained his intellectual interests unimpaired until, about three years ago, a failure of eyesight deprived him of what was both the occupation and the relaxation of his life. His name will rank very high in the history of the studies which he loved.

He was elected a Fellow of the Society of Antiquaries in 1875, was a frequent attendant at the meetings while resident in London, had served on the Council on two occasions, and contributed a paper on an 'Inventory of the Vestry of Westminster Abbey in 1388', which was printed in *Archaeologia*.

ROBERT S. RAIT.

Oscar Montelius, Hon. F.S.A.—Europe has lost one of its greatest leaders in archaeology, but his monumental works survive and will keep his memory green for generations. News of the death of our Hon. Fellow, Professor Oscar Montelius of Stockholm, on 4th November, came too late for a formal account of his personality, his learning and accomplishments to be included in the present number; but his Swedish friends will see that such a record is made, to be a source of inspiration to workers in the many fields that he had made his own for half a century. It was in 1869 that Montelius began writing archaeological papers, and no less than 346 are recorded

to date in the complimentary volume *Opuscula archaeologica Oscari Montelio dicata* presented on his 70th birthday (9th September 1913). Thirty-seven contributors belonging to ten different countries thereby did homage to his extraordinary gifts, and many of them attribute their earliest enthusiasms to his example and precepts. In every sense he was a giant—in stature, in scope and output, in his power of minute analysis combined with the broadest outlook, and above all in his gift of tongues. He could, and often did, address scientific meetings in English, French, or German almost as fluently and correctly as in his mother tongue; and his knowledge of several other languages enabled him to collect and utilize an enormous amount of European material which is or will be rendered available in a series of volumes, superbly illustrated, and published largely at his own expense. It may easily be imagined that he was always one of the most striking and popular figures at international Congresses, where he will be sadly missed.

Of his official career little need be said here. To English archaeologists he always represented the Historical Museum at Stockholm, from the control of which he retired some years ago. He was also State Antiquary of Sweden, and as such was the titular guardian of all antiquities found in Swedish soil. No one could have made better use of the material thus brought to his notice; and not only Sweden but Europe in general has benefited by the comparative studies he undertook himself or entrusted to his zealous band of pupils. These culminated in a chronological scheme for the pre-history of Scandinavia, England, France, Germany, Italy, and Egypt; and it is a striking tribute to his insight that the lines now generally followed in Northern archaeology were laid down by Montelius fifty years ago. In the interval he has been engaged in many controversies, and has erred, if at all, in over-estimating the antiquity of certain metallic forms. Right or wrong, his dating always reached the upper limit, and time alone can decide between his and the more conservative view, as regards Italy as well as northern Europe.

Montelius's treatment of the vast material now at the disposal of archaeologists was based on the typological method, which he preached and practised assiduously and with great effect. Human fashions are notoriously fickle, and development is not always progress; but the creation of a type-sequence brings order out of chaos, and at least provides a working hypothesis. His brilliant example has been largely followed, and admiration for his personality and methods will ever be mingled with regret for his loss among those who were privileged to call him friend and master.

R. A. S.

Reviews

Court Rolls of the Borough of Colchester: Vol. I (1310-1352). Translated by ISAAC HERBERT JEAYES, with Introduction, etc., by W. GURNEY BENHAM, F.S.A., F.R.Hist.S. 11 x 8 $\frac{3}{4}$. Pp. xxxiii + 242. With two illustrations and index. Colchester: Town Council. 1921. 42s.

The borough of Colchester is already honourably distinguished among English towns by its care for and publication of its ancient records. The 'Red Paper Book' appeared in 1902, the 'Oath Book' in 1907, while the Charters were published in 1906. This might have seemed enough for honour, but the Corporation has now begun the issue of a translation of the long series of 250 Borough Court Rolls, extending, with gaps, over the period from 1310 to 1741. The complete publication of the series on the scale of the volume now issued would stretch to forty or fifty volumes, and demands a large measure of financial support from a wider circle than is formed by the inhabitants of the borough, or even of the whole county of Essex.

The introduction by our Fellow, Mr. Gurney Benham, containing as it does a 'Who's Who' of the principal personages mentioned between 1310 and 1352, and the admirable index, 'the work of a lady', make the volume most valuable to any person concerned with the genealogy or local history of Colchester. Wills were, as usual, proved in the Borough Court, and some of them are here printed. Again, in the actual litigation there are so many 'essoigns' that hardly any case is brought to a conclusion without repeated mention of the parties; and, since each mention affords an opportunity of describing the same person by a different name, we get a series of most valuable identifications. Thus, for instance, a comparison of entries establishes that Hugh the Butcher is the same as Hugh de Stowe, and when we read that 'Hugh de Stowe was charged with having constantly made use of litigious and opprobrious language against several persons in the market of Colchester, viz. John le Wolefot and others, as has often been intimated by the same, so that on this account the places where they have exposed their wares for sale have been emptied of buyers and sellers to their no small and manifest loss', we realize that butchers in the fourteenth century were probably as vociferous as they are in certain neighbourhoods in the twentieth. Before quitting the subject of the index, it is worth observing that the table of Corrigenda is an excellent object-lesson of the way in which an intelligent indexer can contribute to the accuracy of a transcript. Those who are themselves experienced copyists will recognize that the number of these Corrigenda, large as it looks at first sight, is no discredit to Mr. Jeayes. Few of us pass the searching test of a good index with as few mistakes.

The volume, however, raises a question which is of more than occasional importance. It is no doubt hard to find readers for mediaeval documents in their original languages, but those who have handled and studied originals are invariably distrustful and critical of

a translation unless the original is also given. This is, in the last resort, a question of expense, and it may reasonably be held that the course adopted in this instance is the only course possible. It will therefore be well to indicate by examples the sort of thing which makes a reader ardently long for a sight of the original, or even of a literal transcript. Elias son of John is charged with driving off the mare of Hubert of Colchester, and impounding it until it was restored to him by the bailiffs. The translation proceeds, 'The said Elyas in defence says, and his advocate pleads', that a service, due from the land where the mare was, was in arrear. In this case the facts seem to point to a distraint for arrears of service, followed by replevin, and subsequent 'Avowry' by the lord, especially as the further proceedings turn on the question whether fealty is necessary to make the tenant 'privy' to the lord (*sibi secretum*). It is impossible to avoid a suspicion that the 'advocate' has been introduced by the translator.

In another case, Henry Osekyn, butcher, is charged with having 'killed bulls before lacerating them, with dogs at the place ordained at Le Berestake, and sold the flesh of the said bulls, whereas it is ordered by the Commonalty that butchers shall not kill bulls nor sell their flesh unless first at the said place they are lacerated', etc. The abstract of this entry runs, 'BUTCHERS PRESENTED FOR SELLING BULLS' FLESH KILLED BY DOGS', but it is tempting to alter the punctuation and to interpret the entry as meaning that the public was not to be done out of its sport; more especially as a prohibition of the sale of the flesh of unbaited bulls is known to occur in other towns.

There is plenty of other interesting matter, though a good deal of the business is concerned with small debts and scolding women. We find two of the latter paying 2s. apiece in 1334 to escape the cucking-stool. They must have been well-to-do to pay so much.

A facsimile enables us to test the accuracy of Mr. Jeayes's transcription, which, it need hardly be said, is extremely good.

CHARLES JOHNSON.

A Treatise on Rigging, written about the year 1625: from a Manuscript at Petworth House. Edited by R. C. ANDERSON. 9 $\frac{3}{4}$ x 6 $\frac{3}{4}$. Pp. 20. Society for Nautical Research: Occasional Publications, No. 1. 5s.

Among the naval manuscripts of the sixteenth and seventeenth centuries in Lord Leconfield's collection at Petworth House are eight undated and anonymous leaves which are scheduled by the Royal Commission on Historical Manuscripts as 'Description of the masts and rigging of a ship'. The work has recently been printed as 'Occasional Publication No. 1 of The Society for Nautical Research', under the editorship of Mr. R. C. Anderson, F.S.A., who concludes from internal evidence that it may be assigned to round about the year 1625. The work therefore forms a valuable companion to the anonymous *Fragments of Ancient English Shipwrightry* in the Pepysian Library, ascribed by Dr. Tanner to the period 1570-1620, Manwayring's *Nomenclator Navalis* of 1625, John Smith's *Accidence*

for *Young Seamen* of the following year, Boteler's *Discourse of Marine Affairs* of 1634, and the volumes of plates by Crescenzio Romano (1601) and Fürtttenbach (1629). These works appeared at a time when considerable additions were being made in a type of ship which throughout Queen Elizabeth's reign and for many years before had not varied much as far as sails and rigging were concerned. But in the early part of the seventeenth century increasing dimensions had the natural result of additional sails and gear. There were three- and four-masted ships in 1485, but it was not till the period of the works mentioned above that the three-master became square-rigged on all her masts, the mizen topsail being authorized for the Navy in an Admiralty MS. of 1618. This sail is mentioned in the Petworth treatise, as is also the 'misson Topgallant saile'. The latter entry is interesting, for it suggests that the adoption of this sail was considerably earlier than is usually supposed. The well-known cut of the *Ark Royal* of 1588 shows the sail as well as a fore topgallant, but the picture is now regarded as conventional, as neither sail is given in her inventory; and though Payne's engraving of the *Sovereign* of 1637 shows the mizen topgallant yard with its sail furled, it is thought doubtful if the latter was ever set. The end of the Seven Years' War for the Navy, and about 1770 for the merchant service, are usually regarded as the period when the mizen topgallant came into regular use. The Admiralty MS. of 1618 mentioned above authorizes fore and main topgallant sails, but does not, we believe, make any reference to a mizen topgallant. No doubt the publication of the Petworth MS. will engender discussion of the matter. We turn with interest to the MS. to see if it throws any light on the unexplained discarding of reef-points as a means of reducing sail from c. 1525 to the time of the Second Dutch War, which, in the absence of any statements by contemporary writers, is one of the puzzles of the nautical archaeologist. During this period of nearly 150 years canvas was reduced or increased by the removal from or addition to the lower sails of 'bonnets' and 'drabblers', which nowadays survive only in a few local types of craft, while reef-points, of which we have representations from the thirteenth to the early sixteenth centuries and then again from c. 1665, will probably vanish only when sails themselves become extinct. But though the MS. clears up several doubtful points, it fails us as regards reef-points; we find only 'Bonnet, Drabler on or 2' for the 'ffore' and 'Mayne courses'. In respect of spritsails the Petworth MS. seems to be ahead of naval practice as set forth in the Admiralty MS. of 1618, for while the latter authorizes the fitting of a spritsail topsail, in the Petworth MS. we find the 'sprit sayle Topgallant' also. Turning from rigging to terms of manœuvre, we find 'port' taking the place of 'larboard', as follows: 'And in steede of Larbord Porte the helme the reason is because the word Larborde may be mistaken by the Helmesman by reason of the affinity it hath wth Starbord in sound.' This is contemporary with 'Port' in the *Nomenclator Navalis* and precedes its mention in Stafford's *Hibernia Pacata* (1633). Mr. Anderson will receive the thanks of nautical archaeologists for placing in their hands a work which takes rank with the classics on its

subject of the seventeenth century and a knowledge of which will certainly facilitate endeavours to clear up various matters at present in dispute. That the able author and the writer of the excellent marginal notes of the Petworth treatise both remain unknown is a matter for regret: Mr. Anderson remarks that though Boteler, Manwayring, and Smith naturally occur to us, there is nothing to show that they were concerned. We cordially endorse his hope that the Society for Nautical Research will continue the series of Occasional Publications which he has happily inaugurated. Manuscripts dealing with the material side of nautical affairs have till recent years suffered neglect in comparison with those of historical interest: there is no doubt as to the very high value possessed by the many still unpublished works scattered about these islands and abroad, perhaps particularly in Spain, the nodal point of Mediterranean and Northern evolution of the ship.

H. H. BRINDLEY.

Man and his Past. By O. G. S. CRAWFORD. $8\frac{1}{2} \times 5\frac{1}{2}$; pp. xv + 227. London: Milford. 10s. 6d.

Mr. Crawford has given us a series of brief, brightly written essays which follow one another in orderly sequence. His book is the outcome of careful thinking over many of the problems connected with the scientific study of Man. In the main, it seems to be offered as a guide and a stimulus to the student and budding researcher, and, as such, the volume may be highly commended. It serves as an introduction to archaeological study, and the author gives valuable hints as to desirable methods of procedure in research, together with warnings as to the pitfalls which lie in the way of those not already highly trained to field-work. While designed chiefly for the enlightenment of the inexpert, even the trained observer will find in these pages food for thought and reminders of important details in method which may at times be forgotten in the haste to acquire 'results'.

Throughout, the author is advocating strict attention to the scientific method and the importance of recording even minor details. As a preacher, Mr. Crawford is skilled in avoiding prosiness, and his book makes pleasant reading. Some of the picturesque biological analogies, which he uses for driving home points in his argument, will not bear critical scrutiny, but, as a means of applying emphasis, they serve their purpose and they need not be subjected to close analysis.

One may justly cavil at his suggesting (p. 58) the adoption of the word 'andrology' as an all-embracing term for 'describing that synthesis which consists of archaeology, history, and anthropology'. Etymologically this is not a happy suggestion; it savours of misogyny, since it implies that, in the comprehensive study of mankind, womankind should be ignored. To make 'anthropology' a subsection of 'andrology' is to make the part include the whole, and involves ignoring the true meanings of these terms and their relationship to each other. If we must fall back upon exotic terminology to eke out the poverty of the English language, let us use the borrowed words in accordance with their strict significance.

Surely, it would be better to urge, as many are doing, that there

should be universal agreement in assigning to 'anthropology' its proper position, as denoting the general comparative study of Man (including Woman) from all points of view. It is the absurd limitations which some, chiefly foreign, authors have tried to impose upon this strictly general and comprehensive word, which have tended to confuse the minds of students.

Mr. Crawford appears somewhat drastic in some of his generalizations. In rightly emphasizing (p. 67) the importance of *types* as indicative of chronological sequences, he illustrates his point by saying, 'if there are four successive periods, *A, B, C, and D*, the remains of *A* and *B* will be found together sometimes, those of *A* and *C* rarely, and those of *A* and *D* never'. This assertion is, no doubt, diagrammatically valid and applicable to particular series, but, surely, it is too dogmatic a statement in view of the undoubted persistence of certain primitive types through a long series of progressive culture changes. Persistence of early types is in itself a fruitful subject of study.

On page 101 is the statement that 'it is of the utmost importance to show geographically the fact that gold, copper, and tin are not found naturally in any part of southern and eastern England; for over just this region prehistoric objects made from these metals are very abundant. It follows that they—or the raw metal of which they were made—must have been introduced into these regions by trade'. Does this imply that the author does not admit the supplies of copper and tin from the southern counties—Cornwall, for instance?

We read, on page 74, 'It is obvious that the further removed we are in space from the country which supplies us with our absolute chronology, the more approximate will our dates become'. Would not 'the less approximate' be more in keeping with his argument?

In spite of certain passages, such as the above, seeming to call for emendation or further elucidation, the book has a distinct value and should find a place upon all archaeological shelves. The relationship of Archaeology to other sciences is clearly and thoughtfully brought out. Each chapter is interesting and suggestive, and throughout the book the author's own enthusiasm and his desire to encourage others are manifest. Mr. Crawford has devoted much time to field-work which he has pursued with success. He is at his best, perhaps, when dealing with geographical features and their bearing upon man's activities. The chapter on Distributions is one of the best, and his discourses about ancient roads and trackways, and about Roman roads and the methods whereby they may be traced, make interesting reading.

He has dealt briefly with many of the lines of study applicable to the solution of the problems of man's early culture-development. As a means of bringing together in true perspective the results of wide-ranging researches into the history of mankind, he has conjured up the vision of an ideal World Museum on a vast and comprehensive scale. Whether this vision can materialize must for a long while remain a moot point. It is not easy to see how, under present conditions, the suggested scheme can be realized, even in America, the home which Mr. Crawford prophesies for this paragon among museums.

The volume is well illustrated and well arranged. There is no index,

which is to be deplored; though it must be admitted that the functions of an index are in part forestalled by a detailed 'Abstract of Contents' for which we may feel grateful.

HENRY BALFOUR.

Prehistory: a Study of Early Cultures in Europe and the Mediterranean Basin. By M. C. BURKITT, M.A., F.G.S. 9 $\frac{3}{4}$ x 7; pp. xx + 438. Cambridge University Press, 1921. 35s.

The first words set down by the author of this book are all too true. He says in his preface, 'A text-book on prehistoric archaeology is by no means an easy thing to write'. To be able to write a book of the kind, and, having the ability, to sit down and write it, is within the capacity of a very few persons. Whether we turn to the limits of time covered by the subject, or to the geographical side, the mass of knowledge required is, in our times, almost beyond human grasp. For to avoid even the more commonplace pitfalls, the writer must be either familiarly acquainted or on speaking terms with geology, palaeontology, human anatomy, mineralogy, and a host of related branches of science, while he should know something at least of the story of the primitive races living to-day. Starting thus equipped, he should bring to his task a good knowledge of his own language, and a very clear method of demonstration.

I fear Mr. Burkitt falls short of this ideal, and it is a great pity. At no period since the first launching of prehistoric studies on the scientific world has there been so urgent a demand for a fearless and impartial statement of their position. Most of the problems that have come to light during the last twenty years are very cursorily treated by him. It is perhaps as well, for many of them require a Huxley or a Tyndall for their presentation in an unbiassed form, and much more research for their solution. But a volume on 'prehistory' should at least give a summary account of the arguments on two sides—e.g. in the matter of Grime's Graves, among others. In one way at any rate Mr. Burkitt has done well, and that is in his account of the wonderful painted caves of Spain. He has worked in this field under the very able guidance of the Abbé Breuil, the most indefatigable and enthusiastic explorer of our times. The Abbé writes an excellent preface to the volume, and is manifestly grateful to his pupil for putting his work and his views before the English public. It is perhaps this extreme concentration on the Abbé Breuil's work that has made Mr. Burkitt deal with other and equally important productions of early man in rather too hasty a manner. The book as a whole bears evidence of haste. No work of the kind can fully serve its purpose unless fully illustrated, and the illustrations should give the unlearned a true impression, and not be inserted as if they were padding. Very little can be said in praise of Mr. Burkitt's plates; the drawings and photographs are both poor, and his scales are maddening. On pl. vii he says, 'No. 4 is 9.7 in. in length, others in proportion except 5', creating a demand on the unfortunate student for mathematics in addition to the other sciences required by the prehistorian. It is to be deplored that Mr. Burkitt or the University Press was not better

advised in the matter of illustration. The majority of the figures they give would, moreover, be of far greater value if inserted in the text.

I regret to have to say these things; I should so greatly have preferred it had I been compelled to use the superlatives of admiration, for, as I said, the subject is badly in need of being treated with fulness and knowledge.

'Strata' is *not* a singular (p. 27); to set down on p. 68, 'Disc, this implement is round or oval', is in itself a little naïve, but the beginner will be somewhat puzzled on pl. viii to discover 'a square angled flat disc'; on p. 283 'rather inaccessible' reminds one of 'rather unique', a favourite phrase among dealers in works of art. The description of a celt on p. 160 would hardly give a very clear image to a person who had never seen one.

Mr. Burkitt has a great deal of knowledge, and there is evidence of the fact in his book. But he must be content to include a smaller field in the title of his next book, and he should get a competent friend to read his proofs and another to make his illustrations.

C. H. READ.

Motya: a Phoenician Colony in Sicily. By JOSEPH I. S. WHITAKER. 9 $\frac{3}{4}$ x 6; pp. xvi + 357. London: Bell, 1921. 30s.

Mr. Joseph Whitaker has published a very useful account of his excavations on the island of Motya, the modern Isola S. Pantaleo, in the Stagnone di Marsala. Motya, though so small, was a very important Phoenician settlement, and in its very smallness is a typical Phoenician site, a town crowded on a small island, like Tyre itself, where the trader-folk could live and traffick safe from sudden attack by the tribes of the mainland. Mr. Whitaker has carried out, assisted by the Cavaliere Giuseppe Lipari-Cascio, very extensive excavations at Motya, which have produced results of great interest, which are published *in extenso* in this book, well illustrated by many admirable photographs. He appends an account of the chief objects preserved in the little museum he has erected on the island, with references to other Phoenician antiquities preserved elsewhere in Sicily. Mr. Whitaker has a keen devotion to the archaeology of Sicily, and especially the district of Marsala, with which he has a close connexion, and has personal acquaintance with archaeological work in other lands, such as Egypt. His labours have therefore been effected with care and knowledge, and cannot be too highly commended. He realizes also the importance of adequate publication of such work, and has carried out this task well.

But we wish he had not preceded his account by a lengthy account of the Phoenicians, not merely in Sicily, but as such, *quæ* Phoenicians, in their own home and elsewhere, which is totally unnecessary. It contains nothing new, and merely repeats commonplaces of ancient history, which might be in place in a general history of the Near East but are uncalled-for here. It would have been more than enough to have referred the reader desirous of information about the Phoenicians generally to some standard history. It is no use repeating what everybody knows, and those who will derive profit from Mr. Whitaker's

admirable account of Motya and of his diggings will not need to be told who the Phoenicians were, what Herodotus or Philo say about them, why and how they colonized, and so forth. Also the account of 'Sicily and its Earliest Inhabitants' was unnecessary. The book should have begun with Chapter IV.

In dealing incidentally with matters outside his purview Mr. Whitaker is occasionally puzzling. In a note on p. 13 he has a rather cryptic sentence about recent research in Mesopotamia, 'carried out during and since the close of the war', which has 'revealed much of interest' in connexion with the question of the origin of the alphabet, and says that 'among the archaeological material which has been brought to light are several Sumerian tablets which have not yet been read'. In the only scientific archaeological excavations in Mesopotamia known to me as having been carried on during and since the war (other than those of the Germans at Babylon and in Assyria, which ceased early in the war), namely those of the British Museum, directed first by Captain R. C. Thomson and then by myself, at Eridu and Ur of the Chaldees, nothing whatever of interest in this connexion was revealed. Though it is true that several Sumerian tablets were found at Ur (not at Eridu), they have been read, and do not contain, nor were ever likely to have proved to contain, anything bearing on the origin of the alphabet. Possibly Mr. Whitaker is referring to discoveries of very archaic signs said to have been made on certain Sumerian tablets now in Berlin, which were found at Farah (the ancient Shuruppak). But these tablets can hardly have been excavated during the war, or at least after the middle of 1915, for military reasons known to all, and after the war there were no scientific excavations at Farah or anywhere but at Tell el-Muqayyar (Ur), Tell el-'Obeid, and Abu Shahrein (Eridu). And in any case one does not see what archaic cuneiform signs have to do with the Phoenician alphabet, unless Mr. Whitaker is suggesting an origin for the alphabet in some early Mesopotamian hieroglyphic system from which the archaic cuneiform developed. One does not know yet where the Sumerians came from, whether they brought their signs with them, or derived them from some hypothetical North Syrian (non-Sumerian) centre of early civilization: a by no means impossible suggestion.

And one may well ask what is Mr. Whitaker's authority for stating that the 'remote period of Babylonian civilization known as the Sumerian "dates" at least as far back as 7000 B.C.'? Most historians cannot get much farther back than 3500 B.C. for the oldest datable Sumerian antiquities, those of the age of Ur-Ninâ. Writing was certainly then in common use, and had no doubt so been for centuries earlier, but, since de Morgan's early dates for the pottery from Susa and Tepe Musyân are not generally accepted (still less the geological dates of Pumpelly for his finds at Anau in Turkestan), we know nothing of its existence as early as 7000 B.C.

The actual antiquities found and preserved at Motya are of the usual kind found in such excavations. By no means can they be called wildly exciting. But perhaps we have been spoiled in these matters by Sir Arthur Evans and Knossos. What our grandfathers in the 'thirties would have saluted as 'elegant Grecian and Roman

antiques' we are apt to dismiss as 'the conventional classical stuff'. Most of the 'stuff' found by Mr. Whitaker is Greek or, in the earlier period, native Sicilian. There is really very little, except some of the earlier pottery, the funerary stelae and an inscription or two, that can be called Phoenician at all. That is comprehensible enough, as the only really national productions and exports of the Phoenicians were their religion and their writing. There are two Motyan cemeteries. The older is on the island itself and naturally contains most of the Phoenician remains and much early Greek pottery, etc. The later is on the mainland opposite, on the side called Birgi, and its contents seem to be almost entirely the ordinary provincial product of the classical period. Their only interest lies in the fact that they are rather early, since Motya ceased to exist in 397 B.C., and the necropolis is not likely to have been used much later. The figurines and other objects can therefore be dated as not later than the beginning of the fourth century. Mr. Whitaker's photographs admirably illustrate these antiquities. He also illustrates fully the Phoenician walls and gates of Motya, which are really of great interest.

H. R. HALL.

Angles, Danes, and Norse in the district of Huddersfield. By W. G. COLLINGWOOD, M.A., F.S.A. County Borough of Huddersfield: Tolson Memorial Museum publications, handbook 2. $8\frac{3}{4} \times 5\frac{3}{8}$; pp. 62, illustrated. Huddersfield, 1921. 1s.

A concise description by our Fellow Mr. Collingwood of the important Dewsbury group of Anglian crosses is of more than local interest; and the Huddersfield programme includes similar handbooks on the development of a local museum, the Roman and prehistoric condition of the district, its rocks, vegetation, and bird-life. Nothing could better exemplify the scope and duties of a provincial museum, and Huddersfield is to be congratulated on its enterprise. The West Riding was not at first included in the Anglian kingdom, and remained British territory till 616 under the names of Elmet and Loidis. Dewsbury was also spared the worst of the Danish invasion of the ninth century, and was connected in some way with Paulinus, whose alleged cross is skilfully restored on p. 27, though the fragments date more than two centuries after the first Roman bishop of the north. Another triumph of restoration is the coffin-lid on p. 32 from Thornhill, on the other side of the Calder valley; and several models by Mr. Lockwood are set up in the Tolson Museum. The fragments catalogued show the gradual degeneration of the beautiful floral scrolls seen on northern crosses of the seventh and eighth centuries; and attention is directed to the local change of style due to the Danes after 950, when they finally impressed their own taste on monumental art. Grotesque conventional forms, especially dragons, take the place of human figures or naturalistic animals; the plaits are simplified, irregular 'snake-slings' are preferred to symmetrical leaf-scrolls; and foliage is converted into wild tangles of monsters tied up in their own tails. The blend of Anglian and Scandinavian elements resulted in such monuments as the Gosforth cross of about 1000, after which date Yorkshire

grew tired of crosses in this style and left their development to other districts. Mr. Collingwood's work here and elsewhere has paved the way for a comprehensive treatment of our early Christian monuments; and may have a quickening effect across the border, where there is unlimited scope for dating and interpretation.

REGINALD A. SMITH.

Periodical Literature

The English Historical Review, vol. 36, October 1921, contains the following articles:—‘Adventus Vicecomitum’, 1258–72, an examination of the position of affairs at the Exchequer at the end of the reign of Henry III, by Miss Mabel Hills; Parliament and the Succession question in 1562/3 and 1566, by Mr. J. E. Neale; Trading with the Enemy and the Corunna packets, 1689–97, by Mr. G. N. Clark; ‘Monasterium Niridanum’, an attempt to settle the site of the monastery of Abbot Hadrian, the companion of Archbishop Theodore, by Dr. R. L. Poole; The Avranches manuscript of Vacarius, by Dr. F. de Zulueta; Exchequer and Wardrobe in 1270, by Mr. L. Ehrlich; The Channel Islands Petitions of 1305, by Mr. R. L. Atkinson; A List of Original Papal Bulls and Briefs in the Department of Manuscripts, British Museum, part ii, by Mr. H. Idris Bell; and a letter of 1721 from St. Saphorin to Townshend, by Mr. C. S. B. Buckland.

The Journal of the Royal Anthropological Institute, vol. 51, January–June, 1921, contains the following papers on archaeological subjects:—The Long-Barrow race and its relationship to the modern inhabitants of London, by Dr. F. G. Parsons; the older Palaeolithic Age in Egypt, by Dr. C. G. Seligman; a collection of Neolithic axes and celts from the Welle basin, Belgian Congo, by Mr. R. F. Rakowski; excavations at the Stone-axe factory of Graig-Lwyd, Penmaenmawr, by Mr. S. Hazzledine Warren; and some early British remains from a Mendip Cave, by Dr. L. S. Palmer.

The Journal of Hellenic Studies, vol. 41, part 1, contains the following papers:—Alexander's *ὑπομνήματα* and the ‘World Kingdom’, by Mr. W. W. Tarn; Heracles son of Barsine, by Mr. Tarn; the problem of Byzantine Neumes, by Mr. H. J. W. Tillyard; the progress of Greek epigraphy, 1919–1920, by Mr. M. N. Tod; Cleostratus Redivivus, by Mr. E. J. Webb; a Minoan bronze statuette in the British Museum, by Mr. F. N. Pryce; the Greek of Cicero, by Mr. H. J. Rose; and red-figured vases recently acquired by the British Museum, by Mr. H. B. Walters.

The Journal of Roman Studies, vol. 9, part 2, contains the following papers:—The Agricolan occupation of North Britain, by Dr. George Macdonald; Roman Colchester, by Dr. Mortimer Wheeler and Mr. P. G. Laver; The Bodleian MS. of Pirro Ligorio, by Dr. T. Ashby; Placentia and the battle of the Trebia, by Professor T. Frank;

the Caratacus stone on Exmoor, by Mr. F. A. Bruton; and an ancient hill-fortress in Lucania, by Dr. T. Ashby and Mr. R. Gardner.

Annals of Archaeology and Anthropology, University of Liverpool, vol. 8, nos. 3, 4, contains the third part of Mr. F. Ll. Griffiths's report on the Oxford excavations in Nubia, dealing with Nubia from the Old to the New Kingdom; and a paper by Mr. H. A. Ormerod on ancient piracy in the Eastern Mediterranean.

Proceedings of the Huguenot Society of London, vol. 12, no. 3, contains papers by Mr. M. Wilkinson on the Survey of Languedoc in 1698 by Lamoignon de Bâville, Intendant of the two *généralités* of Toulouse and Montpellier; by Mr. V. B. Redstone on the Dutch and Huguenot settlements of Ipswich, and by Mr. Wyatt-Paine on the Last of the Valois.

The ninth volume of the Walpole Society, 1920-1921, contains an article by the Earl of Ilchester on Queen Elizabeth's visit to Blackfriars, June 16, 1600, identifying the figures in the picture at Sherborne castle, well known from Vertue's engraving; Mrs. Finberg contributes a long article on Canaletto in England, with a catalogue raisonné of his English views; Mr. C. R. Grundy publishes documents relating to an action brought against Joseph Goupy in 1738; and Mr. A. J. Finberg writes on an authentic portrait by Robert Peake, being the portrait of Charles I, when a boy, in the University Library, Cambridge.

The Genealogist, vol. 38, parts 1 and 2, contains the following papers:—On the armorial glass at Vale Royal, Spurstow Hall, Utlington Hall, and Tarporley rectory, in the county of Chester, by Messrs. J. P. Rylands and R. Stewart-Brown; pedigrees of some East Anglian Dennys, by Rev. H. L. L. Denny; the concluding part of the paper on the Early Crewe pedigree, by Mr. W. F. Carter; parts 19 and 20 of the Aspinwall and Aspinall families of Lancashire, by Mr. H. O. Aspinall; further portions of the marriage licences of Salisbury, by Canon Nevill and Mr. R. Boucher; Grant of arms to William Peter Rylands of Massey Hall in Thelwall, co. Chester, and the other descendants of his father, 1918; the possible ancestors of Archbishop Theobald and his protégé Thomas à Becket, the martyr, by Mr. Walter Rye; extracts from Poltalloch writs; the origin of the Giffords of Twyford, by Dr. A. Moriarty; the pedigree of Crewe, by Mr. W. A. Lindsay, and further instalments of Mr. Fry's index to marriages from the *Gentleman's Magazine*, and of Mr. McEleney's Hampton Court, Hampton Wick, and Hampton-on-Thames Wills and Administration.

Miscellanea Genealogica et Heraldica, 5th series, vol. 4, parts 5 and 6, contains a pedigree of Charlton of Kent; the early pedigree of Vaux of Harrowden, by Mr. G. A. Moriarty; a continuation of the account of the family of Milborne of Somerset and Monmouthshire; Admonitions upon putting on the Garter and the George; notes on the Lewis family; genealogical extracts from sixteenth-century Kentish Wills; Births, Marriages, and Deaths gleaned from the Admiralty Records; a continuation of the Register of Holy Trinity, Knightsbridge, 1658-1700; Feet of Fines, Divers counties, Henry VIII; Monumental inscriptions of Bromley, Kent; Notes on the Rogerson family; Marten Wills, Lewes (Sussex) Registry.

The Library, 4th series, vol. 2, no. 2, contains articles by Sir D'Arcy Power on the bibliography of three sixteenth-century English books connected with London hospitals; by Mr. R. B. McKerrrow on the use of the Galley in Elizabethan printing; on the printing of the Beaumont and Fletcher folio of 1647, by Mr. W. W. Greg; on the Ulrich and Afra Vincent of Beauvais, by Mr. S. Gaselee; and on a little-known Bohemian herbal, by Mr. S. Savage.

The Mariner's Mirror: the Journal of the Society for Nautical Research, vol. 7, nos. 1-11 (January-November, 1921), contains the following papers:—Bypaths in Naval Literature, being extracts from little-known naval books, by Commander C. N. Robinson, R.N.; a forgotten life of Sir Francis Drake, by Mr. G. Robinson; the East India Company and interlopers, by Mr. H. S. Vaughan; Brigantines, by Mr. R. M. Nance; side-lights on the Slave Trade, by Mr. G. E. Cooper; comparative naval architecture, 1670-1720, by Mr. R. C. Anderson; Gwyn's Book of Ships, by Mr. E. A. Dingley; Drake and his detractors, by Mr. G. Callender; Sea-power and the winning of British Columbia, by Dr. Holland Rose; Brigantines, by Mr. A. Balsen; the preamble to the Articles of War, by Mr. L. G. Carr Laughton; the Diary of a supercargo, by Mr. G. P. Insh; the development of the capital ship, by Mr. G. Robinson; the Ozanne family, by Mr. F. Bernelle; Galleys and Runners, by Sir Julian Corbett; Killicks, by Mr. R. M. Nance; English and Dutch privateers under William III, by Mr. G. N. Clark; Pierre Puget, by Mr. F. Bernelle; Captain's orders for a ship of the Indian Navy, about 1855, by Paymaster Lieut. D. C. Roe, R.N.; Square-rigged vessels with two masts, by Messrs. H. H. Brindley and Alan Moore; the evolution of shipping, by Mr. H. H. Brindley; Shetlandic Fish-hooks, by Mr. R. S. Bruce; Naval Museums, v, the United States, by Mr. I. R. Wiles; Seventeenth-century profiteering in the Royal Navy, by Miss I. G. Powell; the ship of St. Paul's last voyage, by Mr. J. Sottar; the 'Victory' after Trafalgar, by Engineer Commander F. J. Roskrug, R.N.; the trial and death of Thomas Doughty, by Mr. G. Robinson; Drake at the suit of John Doughty, by Mr. W. Senior; Notes on uniform in the navy of the order of St. John, by Mr. H. S. Vaughan; the maritime school at Chelsea, by Captain Bosanquet, R.N.; Wreck raising in 1786, by Mr. F. K. Ingram; and Popham's expedition to Ostend in 1798, by Mr. G. E. Manwaring.

Old-Lore Miscellany, vol. 9, part 1, being no. 59 of the Old-lore series of the Viking Society, contains papers on some old Caithness customs and superstitions, by Mr. J. Mowat; on weather words in the Orkney dialect, by Mr. H. Marwick; on the Caithness and Sutherland topography of 'William the Wanderer', by Mr. James Gray; the Journal of an expedition to Shetland in 1832, by Mr. E. Charlton; the concluding portion of the rental of Brabster, Caithness, 1697; and notes on the fiscal antiquities of Orkney and Shetland, by Mr. A. W. Johnston.

Transactions of the Bristol and Gloucestershire Archaeological Society, vol. 42, contains:—Presidential address by Earl Beauchamp, in which he deals with Madresfield court and its owners; a sketch of the history

of Malvern and its owners, by Mr. G. McN. Rushforth; the collegiate church of Ledbury, by Canon Bannister; the architecture of the church of St. Michael, Ledbury, by Mr. S. H. Bickham; Gloucestershire fonts, fifteenth century, by Dr. Fryer; a glass-house at Nailsworth (sixteenth and seventeenth centuries), by Mr. St. Clair Baddeley; some miscellaneous Bristol deeds, by Mr. L. J. U. Way; Bristol archaeological notes 1913-19, recording discoveries in the city, by Mr. J. E. Pritchard; and Miscellaneous notes on Gloucestershire bells, supplementary to previous papers, by Mr. H. B. Walters.

Records of Buckinghamshire, vol. 11, no. 2, contains the Rev. F. W. Ragg's second article, with transcript, of a fragment of a MS. of the Archdeaconry courts of Buckinghamshire, and contributions by Mr. W. J. Carlton on a Shorthand 'Inventor' of 300 years ago; by Mr. G. Eland on the manor of Great Horwood; by Mr. R. F. Bale on private burial-places at Newport Pagnell; and by Mr. W. Bradbrook on Clifton Reynes Parish account book.

Transactions of the Cambridgeshire and Huntingdonshire Archaeological Society, vol. 4, part 4, contains a continuation of the Rev. W. M. Noble's translation of the cartulary of the priory of St. Mary, Huntingdon; a note on a Bellarmine jug found in Huntingdonshire, by Mrs. Yeatherd; and a transcript of the Abbot's Ripton briefs, by the Rev. E. H. Vigers.

Vol. 4, part 5, of the same transactions contains a report on the records of the Archdeaconry of Northampton, by the Rev. W. M. Noble and Mr. S. I. Ladds.

Transactions of the Essex Archaeological Society, vol. 16, part 1, contains the following papers:—The Heart of St. Roger, bishop of London, died 1241, by Dr. J. H. Round; St. Botolph's Bridge, Colchester, by Dr. Round; an insula of Roman Colchester, report of an excavation inaugurated by the Morant Club in Castle Park, by Dr. Mortimer Wheeler; Roger Chamberlayn of Colchester castle, by Mr. Gurney Benham; a monumental brass (of a civilian c. 1425) recently discovered in Essex and now in Dovercourt church, by Messrs. Miller Christy and W. W. Porteous.

The Essex Review, vol. 30, October 1921, contains papers by Mr. C. H. Butcher on some heraldic glass in North-West Essex; by Mr. G. O. Rickword on an old-time appeal for recruits, 1786; by Mr. E. Fuller on Thomas Fuller's Essex: the concluding portion of the transcript of the Minister's accounts of St. Osyth's priory; the fort or blockhouse at East Mersea, by Mr. L. C. Sier; Notes on West Ham, by Mrs. Mason; and Essex references from Stortford records, by Mr. J. L. Glasscock.

The Historical Collections for Staffordshire, edited by the William Salt Archaeological Society, 1921, contains a Calendar of the Salt MSS. edited by M. E. Cornford and E. B. Miller, and a transcript of the Lay Subsidy Hearth Tax, Pyrehill Hundred, 1666.

Sussex Archaeological Collections, vol. 62, contains the following papers:—The Lords Poynings and St. John, by Dr. J. H. Round; the architectural history of Amberley Castle, by Mr. W. D. Peckham; the Manor of Radynden: the Radyndens and their successors, by

Mr. Thomas-Stanford; Poling and the Knights Hospitallers, by Mr. P. M. Johnston; the manor of Chollington in Eastbourne, by Rev. W. Budgen; the manors of Cowfold, by Mr. P. S. Godman; and the early history of Ovingdean by Dr. Round.

Papers, Reports, &c. read before the Halifax Antiquarian Society, 1920, contains the following communications:—Hollinghey in Sowerby, by Mr. H. P. Kendall; Tokens, illustrative of spinning and weaving, by Mr. S. H. Hamer; Peel House in Warley, and Oats Royd, by Mr. T. Sutcliffe; Historical notes on Harley Wood, by Mr. A. Newell; Early volunteers and cavalry of Halifax, by Mr. T. W. Hanson.

The Scottish Historical Review, vol. 19, October 1921, contains articles on the eighteenth-century Highland landlords and the poverty problem, by Miss Margaret Adam; on the daughter of Anne of Denmark's secretary, by Miss Margaret Thompson; on the Western Highlands in the eighteenth century, by Canon MacLeod; and on an unpublished letter of Sir Thomas Browne, 1659, by Professor Monro.

The Journal of the Royal Society of Antiquaries of Ireland, vol. 51, part 1, contains part 2 of Mr. T. J. Westropp's article on the promontory forts of Beare and Bantry; the carved altar and mural monuments in Sligo abbey, by Mr. H. S. Crawford; the pedigree and succession of the house of MacCarthy Mor, by Mr. W. F. Butler; the state coach of the Lord Mayor of Dublin and the state coach of the Earl of Clare, Lord Chancellor of Ireland, by Mr. W. G. Strickland; and part v of Mr. Goddard Orpen's article on the Earldom of Ulster. Among the miscellanea may be noted a description of an Ogham stone at the Cotts, co. Wexford, and of the font in St. Peter's church, Drogheda.

Journal of the County Kildare Archaeological Society, vol. 9, no. 6, contains a further instalment of the transcript of the Chetwood letters of the early eighteenth century; a continuation of the Rev. Matthew Devitt's paper on the see lands of Kildare; a continuation of the list of Kildare Members of Parliament; a paper on the Grand Canal, connecting the Shannon and Barrow, by Mr. H. Phillips; and a continuation of the Ferns Marriage Licences, edited by Mr. H. C. Stanley-Torney. Among the miscellanea is a note by Lord Walter FitzGerald on the fourteenth-century Eustace effigy now in the Protestant church at Ballymore-Eustace, co. Kildare, with notes on the family.

West Wales Historical Records: the annual magazine of the Historical Society of West Wales, vol. 8, contains the following papers:—On Carmarthenshire under the Tudors, by Mr. T. H. Lewis; a note on Fishguard manor, by Mr. F. Green; the chantry certificate of St. Mary's College, St. Davids; a transcript of the register of St. Peter's, Carmarthen, Marriages 1762-1799; Edward Richard and Ystrad Meurig, by Rev. A. T. Fryer; some additional names of Pembroke-shire parsons; street names of St. David's city, by Mr. F. Green; Stedman of Strata Florida, by Mr. F. Green; Harries of co. Pembroke, by Mr. F. Green; manorial customs in co. Carmarthen; Dewisland coasters in 1751, by Mr. F. Green; the Tuckers of Sealyham, by Mrs. C. O. Higgin and Mr. F. Green; the Edwardes of Sealyham, by Mrs.

Higgon and Mr. Green; Lloyd of Danyralt, by Mr. Green; and a continuation of the List of Marriage bonds of West Wales and Gower.

Bulletin de l'Académie des Inscriptions et Belles-Lettres, January-February 1921, contains the following articles:—The Aramean-Lydia bilingual inscription at Sardes, by Dr. A. E. Cowley; Excavations at Curtea de Arges, by M. Nicolas Jorga, relating discoveries, in the Early Church, of tombs of the fourteenth Roumanian dynasty; Marcus Aurelius, Lucius Verus and the governor Catulinus at Thebes, Egypt, by M. Jules Baillet.

Revue archéologique, 5th series, vol. 14, July-October 1921, contains the following papers:—Marble candlesticks found in the sea near Mahdia, by MM. Merlin and Poinssot; the sun and moon in representations of the crucifixion, by M. L. Hauteœur; the Van Eycks' picture of the Lamb and talismanic engraved gems, by M. F. de Mély; the older Canaanite inscriptions, by M. C. Bruston; the so-called ancient tomb at Neuvy-Pailloux, by M. A. Blanchet; the lead trade in Roman times (concluding part), by M. M. Besnier; observations on Valentine and the Valentine heresy, by M. S. Reinach; and the false Egyptian sarcophagus at Tarragona, by M. P. Paris.

Bulletin historique de la Société des Antiquaires de la Morinie, vol. 13, part 1, contains an article by M. J. A. Carpentier on the Seigneurie of Isbergnes and its dependant fiefs.

Pro Alesia, vol. 6, new series, nos. 23, 24, 25, contains the following articles:—Excavations by the Scientific Society of Semur at Alesia in 1905-1914; a so-called Roman vase in the Geneva Museum and the prototypes for its ornamentation, by M. W. Deonna; a neolithic incineration site in the wood at Montpalais-à-Rully (Saône-et-Loire), by M. A. Perrault-Dabot; an account of the congress of Scientific Societies held at Strasbourg in May 1920; the consequences and results of the capture of Alesia, by M. J. Toutain; and a conspectus of Gallo-Roman archaeology in 1919.

Det kongelige Norske Videnskabers Selskabs Skrifter, 1918 og 1919 (Trondhjem, 1921), contains besides anatomical studies (in English) and a long geological article, Th. Petersen's survey of additions to Trondhjem Museum in 1918; a Runic amulet of stone, by the same and Magnus Olsen; two papers by A. Nummedal on occupation-sites of prehistoric date; and antiquities of the Roman Iron Age in Trøndelagen, with illustrations of bronze vessels, bucket-handles, and a glass beaker.

Oudheidkundige Mededeelingen uit 's Rijksmuseum van Oudheden te Leiden, 1921, part 1, contains the following papers:—A marble head, probably of Artemis, in the museum at Leyden, by Madame J. P. J. Brants; the town of Nijmegen in the Roman epoch: the Valkhof, by Mr. M. Daniels; circular earthworks of the Montferland type and their signification, by Mr. Hofmeister; the river Linga (Vecht), by Dr. Holwerda.

Crónica general del primer congreso de estudios Vascos, 1918 (Bilbao, 1920), contains the following papers of archaeological interest:—Prehistory, by D. J. M. de Barandiaran; religious history, by Dr. E.

Urroz ; origins of the claustral life in the Basque country, by R. P. J. A. de Lizarraldo ; problems in the history of art in the Basque country, by D. A. de Apraiz ; Christian monumental archaeology in the Basque country, by P. F. L. del Vallado ; general aspects of Basque art, by D. R. Gutierrez ; Church music in the history of the Basque country, by P. J. de Arrue.

Academia das Sciências de Lisboa ; Boletim da classe de letras, vol. 13, no. 2, contains amongst other papers the following articles :—An Abyssinian ambassador in Portugal in 1452, by D. P. de Azevedo ; the journey of the Empress Isabella to Castela, by D. A. Braamcamp Freire ; a chart of the fifteenth century and the discovery of Brazil, by D. F. M. E. Pereira ; and studies on the Inquisition in Portugal, by D. A. Baião.

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Architecture.

- *The Renaissance of Roman architecture. Part I, Italy. By Sir Thomas Graham Jackson. 9 $\frac{1}{2}$ x 7. Pp. x + 200. Cambridge : at the University Press.
- *Mont Orgueil Castle, its history and description. By Edmund Toulmin Nicolle. 10 x 7 $\frac{1}{2}$. Pp. [iv +]207. Beresford Library, Jersey.

Art.

- *A catalogue of Miniatures, the property of His Grace the Duke of Northumberland. Compiled by J. J. Foster. 9 $\frac{3}{4}$ x 7 $\frac{1}{2}$. Pp. xxiv + 48, with 18 plates. London : Privately printed.
- *Charles Hercules Read : a tribute on his retirement from the British Museum and a record of the chief additions to the Department of British and Mediaeval Antiquities during his keepership, 1896-1921. 11 x 8 $\frac{1}{2}$. Pp. xii, with 56 plates and descriptions. London : Privately printed.
- *Victoria and Albert Museum : A selection of drawings of old masters in the Museum collections, with a catalogue and notes. By Henry Reitlinger. 9 $\frac{1}{2}$ x 7. Pp. vii + 68, with 30 plates. London : Stationery Office. 5s.

Assyriology.

- The Early Dynasties of Sumer and Akkad. By C. J. Gadd. 7 $\frac{1}{4}$ x 4 $\frac{3}{4}$. Pp. vi + 43. Luzac. 6s.
- The first campaign of Sennacherib, King of Assyria, B. C. 705-681. By S. Smith. 8 $\frac{1}{2}$ x 5 $\frac{1}{4}$. Pp. vi + 90. Luzac. 30s.

Black Jacks.

- Black Jacks and Leather Bottels. By Oliver Baker. 12 $\frac{3}{4}$ x 9 $\frac{3}{4}$. Pp. 197. Burrow. 63s.

Ceramics.

- *A general history of porcelain. By William Burton. Two vols. 9 $\frac{3}{4}$ x 7 $\frac{1}{4}$. Pp. xviii + 204 ; ix + 228. Cassell. 84s.
- *Corpus of prehistoric pottery and palettes. By W. M. Flinders Petrie. 12 $\frac{1}{4}$ x 9 $\frac{3}{4}$. Pp. 7, with 61 plates. London : British School of Archaeology in Egypt.
- Figurative Terra-cotta revetments in Etruria and Latium in the VI and V centuries B. C. By E. Douglas Van Buren. 10 $\frac{1}{4}$ x 7 $\frac{1}{2}$. Pp. x + 74, with 32 plates. London : Murray. 16s.

Egyptology.

- Balabish. By G. A. Wainwright. Egypt Exploration Society, Memoir 37. 12 $\frac{1}{2}$ x 10. Pp. viii + 78, with 25 plates. 42s.

See also Ceramics.

Heraldry.

British Heraldry. By Cyril Davenport. 7 x 4 $\frac{1}{2}$. Pp. viii + 222. Methuen. 6s.

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- * Letters of the fifteenth and sixteenth centuries from the archives of Southampton. Edited by R. C. Anderson. Publications of the Southampton Record Society. 10 x 6 $\frac{1}{2}$. Pp. xvi + 80. Southampton.
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- * Allegations for Marriage Licences in the Archdeaconry of Sudbury, in the County of Suffolk, during the years 1815-1839. Part 4. Edited by W. Bruce Bannerman and G. G. Bruce Bannerman. Harleian Society publications, vol. 72. 10 $\frac{1}{2}$ x 6 $\frac{1}{2}$. Pp. viii + 177-330. London, 1921.
- * Pedigree of the family of Beazley, compiled by F. C. Beazley. 10 $\frac{1}{2}$ x 7. Pp. 14. Privately printed.
- * The private character of Queen Elizabeth. By Frederick Chamberlin. 8 $\frac{1}{2}$ x 5 $\frac{1}{2}$. Pp. xxi + 334. London: Lane. 18s.
- * Old Plans of Cambridge, 1574-1798 . . . reproduced in facsimile with descriptive text. By J. Willis Clark and Arthur Gray. 9 x 5 $\frac{1}{2}$. Pp. xxxvii + 154, with a portfolio of plates. Cambridge: Bowes and Bowes, 1921. 84s.
- * The history of the family of Dallas and their connections and descendants from the twelfth century. By the late James Dallas. 10 x 7 $\frac{1}{2}$. Pp. xi + 611. Edinburgh: Privately printed by T. and A. Constable. To subscribers, 42s.
- * The Book of Duarte Barbosa. Translated, etc., by M. Longworth Dames. Vol. 2. 8 $\frac{1}{2}$ x 5 $\frac{1}{2}$. Pp. xxxi + 286. Hakluyt Society, ser. 2, vol. 49.
- * Charterhouse in London: Monastery, Mansion, Hospital, School. By Gerald S. Davies. 9 x 6. Pp. xix + 447. London: Murray. 25s.
- * Minutes and Accounts of the corporation of Stratford-upon-Avon and other records, 1553-1620. Transcribed by Richard Savage, with introduction and notes by Edgar I. Fripp. Vol. 1, 1553-66. Dugdale Society's publications, vol. 1. 9 $\frac{1}{2}$ x 6 $\frac{1}{2}$. Pp. ix + 152. Oxford: for the Dugdale Society.
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- * John Siberch, the first Cambridge printer, 1521-2. By George J. Gray: in commemoration of the four-hundredth anniversary of printing in Cambridge. 9 x 7. Pp. 25. Cambridge: Bowes and Bowes. 2s. 6d.
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Indian Archaeology.

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- **Archaeological Survey of Burma: a list of inscriptions found in Burma*. Part I. The list of inscriptions arranged in the order of their dates. Compiled and edited by C. Duroiselle. $13\frac{1}{2} \times 8\frac{1}{2}$. Pp. ix + 216. Rangoon. Rs. 6.
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